

Memor^{annual} of the Rise & Fall of the River
Ganges, at Gangakhor in 1815 -
Survey of the River at Berhampore in Bengal
from 1815 to 1822 inclusive
Comprehending a view of the River of Ganges and
its branches in 1821 - and
Table of the Rise of the Tides, at the mouth
of the Hooghly or Salween Branch of the Ganges - 1815 + 1820

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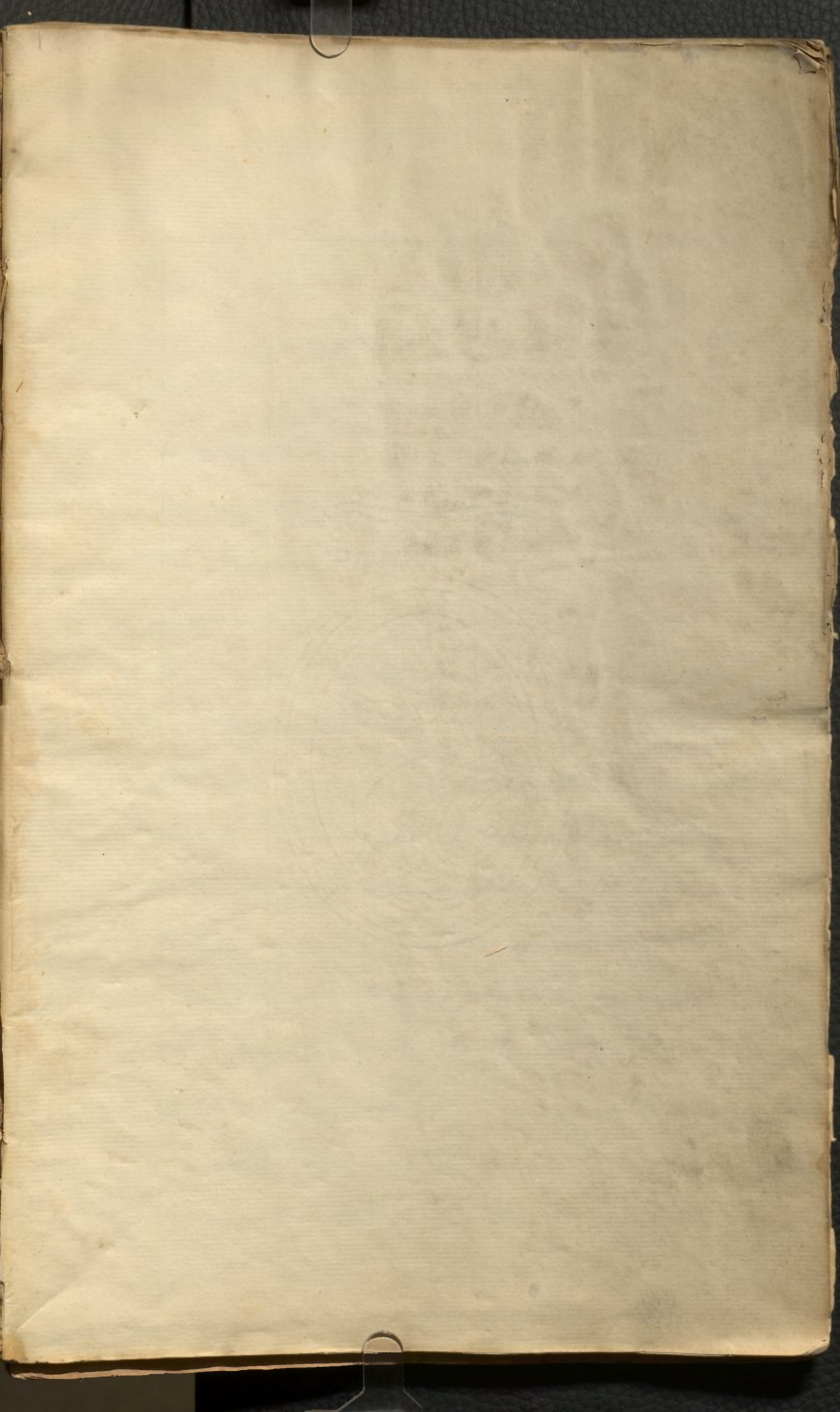
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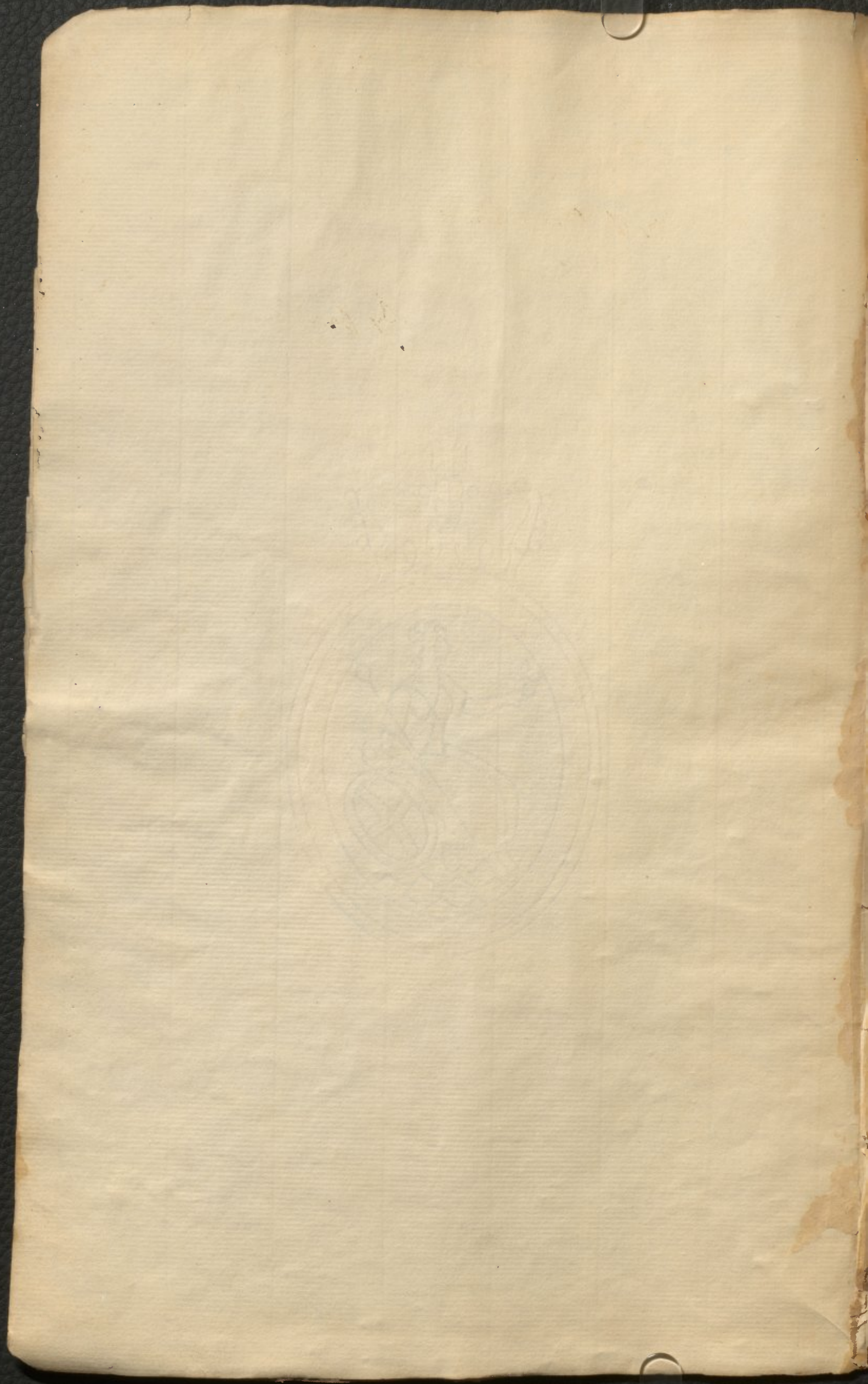
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THE NATURAL HISTORY SOCIETY
OF MONTREAL







~~Observations~~
Rise of the Ganges at Lhasipore.

Memoir, of ~~Observations~~ of the Progressive Rise of the Waters of the
Ganges, at Lhasipore during the Rainy Season of 1815.

By Capt Lachlan 17th Regt.

Preliminary Remarks. On perusing, some years ago,
the interesting and instructive account of the Rivers Ganges and
Burrampooter, by our great Indian Geographer, Major Rennel
and comparing the period of the first Rise of their waters, as given
by him with some casual observations, on the progressive increase of the
Ganges, made by myself, I was inclined to think, that he had asigned
the lowest level of that River, rather too early a date in placing it in spring.
I was in consequence induced, to take notice of the fall of the River for
one or two seasons, and perceived that, in the middle part of its
course at least, it appeared generally at its lowest Ebb, about
the latter end of May. It then occurred to me, that probably the
waters of the great branches towards the Head of the Delta begin
to rise sooner, than either the Parent River, or its Sister Stream
the Jumna; and as this seems connected with the disputed point
of whether the annual Swelling of the Ganges, prior to the
commencement of the rains in the flat countries, be owing
to

to the more early rains in the mountains near its source, or to the melting of the snows in these Alpine Regions, I was desirous of ascertaining the fact. - To enable me to approximate to something like an opinion on this subject, I resolved to keep a regular journal of the Rise of the Ganges, during the whole of one season, and to endeavour to get some other person to keep a similar account, at the same time, at some place or station towards the head of the delta; that by comparing the two, and making allowance for the intermediate distance, length of course, and rate of current, we might be enabled to observe, whether there was any, and what difference. In this, however, I was unable to succeed; and I was, at last obliged to content myself, with the amusement of observing the progressive Rise of the River, during the period, shown in the following diary. -

June 7, 1815. - After daily careful observations for some time back, I this day perceived, that River had at last retired to its lowest level; and that it now indicated a slight inclination to rise. Immediately on ascertaining this I inserted within the water's edge, a strong bamboo, previously prepared, regularly marked off upwards into feet, halves, quarters and inches, by which its progressive rise or fall could be easily and correctly noted, and by this I observed as follows. -

June

June 16. - The River had by this time risen, by very irregular and slow degrees 3 feet 4 inches, after which it continued stationary for several days, and then progressively fell nearly a foot, till the 24th. June 25th. - The River this day recommenced rising for the 3rd time, and by next morning (26th) attained to 4 feet above its lowest level: At noon (26th) found it 4 f. 4 i. and at sunset, it had risen to 5 feet. - June 27. - At sunrise 5 f. 7 i., at 1 P.M. 5 f. 11 i., and at sunset 6 f. 1 i. - June 28. - At sunrise 6 f. 5 i. at sunset 6 f. 7 i. and at 9 P.M. 6 f. 9 i. - June 29. - At sunrise 7 f. 1 i.; at noon 7 f. 3 i.; and at sunset 7 f. 7 i. - June 30. - At 8 P.M. 9 f. 7 i.; at noon, not noted; and at sunset 11 f. 5 i. -

N. B. - This day removed the Bamboo to near the water's edge, but the rise or fall continues to be noted, as from the beginning. The necessity of doing so is evident one so long Bamboo, tho' fixed ever so firmly, could not have been exposed to so strong a current, without great chance of being either moved from its perpendicular position, or being dislodged, and carried away altogether; besides which, the vibration of so long a Bamboo would have been a great obstacle to noticing exactly the part in contact with the water's edge.

July

July 1. - At sunrise 12 f. 3 i.; and rising fast; and at
set 12 f. 5 i. - July 2. - At sunrise 15 f. 1 i., at sunset 15 f. 10 i. -
July 3. - At sunrise 16 f. 1 i.; at sunset 16 f. 2 i. - July 4. - At
sunrise this morning the river had fallen 2 inches, and at sunset
had retired 2 more. - July 5th - It had at sunrise retired to
15 f. 9 i.; but it recommenced rising, in the course of the
day, and by sunset had mounted up to 15 f. 11 i. - July 6. -
At sunrise 16 f. 5 i.; and at sunset 16 f. 10 i. -

July 7. - At sunrise the height was 16 f. 10 i.; and it
continued stationary, during the first part of the day; after
which, from this date, to the 22^d. - the river fell by slow
degrees, till it had retired 2 $\frac{1}{2}$ feet, or, to 14 f. 4 i. - It then
again indicated a rise, and on the morning of the 25th, it
reached to 16 f. 3 i. -

July 27th - At sunrise, the river had resumed its former
height of 16 f. 10 i.; and at sunset had attained to 17 f. 9 i.; and
promised still to rise. - July 29th - State in the morning not re-
noted: at sunset 18 f. 6 i. - July 30. - Falling in the morning:
at sunset 18 feet, afterwards nearly stationary, till the morning
of the 1st August. -

August 1. - At sunrise inclined to rise again, and
at

at sunset at 18 f. 10 i.; and rising fast. — A. D. Here the
Bamboo was again removed to near the water's edge but the
rise is noted as before. — August 2. — At sunrise 21 feet;
at 1 P. M. 22; at sunset 22 f. 10 i.; and still rising. — August
3. — At sunrise 24 f. 3 i. at 1 P. M. 25 f.; at sunset 25 f. 4 i.

August 4. — At sunrise the river had risen to 25 f. 9 i.;
and at sunset to 26 f. 1 i.; and it rose about 3 i. more, during the
night, as indicated by a frothy ring round the Bamboo at that height
but it had again subsided to 26 f. 1 i. before the morning. — August
5th. — At sunrise 26 f. 1 i.; at other times not noted; but it had been
observed to continue to rise, during the whole of the day. —

August 6th. — Sunrise 26 f. 8 i., and rising fast: evening not
noted. — August 7. — Sunrise 27 f. 11 i.; at sunset 28 f. 4 i. — August
8. — Sunrise 28 f. 10 i.; at sunset 29 f. 6 i. — August 9. — At 9 A. M.
29 f. 9 i. and rising fast. — August 10. — Morning height not noted
at sunset 32 f. and apparently stationary. — August 11. — At sunrise
falling, and at noon 31 f. 9 i.; evening not noted, but still falling.

August 12th. — Still retreating, and by evening it had
fallen to 29 f. 9 i. or 2 f. 3 i. below its greatest height. — I observed
regularly for 4 or 5 days more, during which the river continued
to retire rapidly, till it had sunk 12 feet below its highest level.

It

It then remained stationary for a few days; and afterwards resumed a progressive fall, from which, with the exception of one or two temporary rises of a foot or so, it never recovered. So here ended my observations.—

Remarks.— During the whole of the rainy season, as far as I could perceive or learn, the rise or fall of the river was not influenced, in any perceptible degree, by the most copious rains in the neighbouring districts.— The only effects produced by these rains, were a more muddy and frothy stream, and a greater proportion of brushwood, straw, ashes, and other impurities, floating on its surface, washed down from the surrounding plains and villages.— During strong easterly winds, however, as was naturally to be expected, the rise was greater and quicker than usual; and on their subsiding, there appeared an increased rapidity, but not always, a corresponding sudden fall. It may also be added, that though 32 feet be the highest level of the year 1815, I have reason to think, that the river frequently rises considerably higher; and from recollection and examination of particular parts in the bank, to which the water reached the year before, I am aware, that the rise of 1815 fell short of that, by at least $\frac{1}{2}$ or 2 feet.— It is at the same time, worthy of observation, that

the

the extreme rise shewn by my measurement, is to an inch, exactly the same, as that found by Major Rennel at Jellinghy 30 years ago, though the other proportions do not much correspond. The comparative scale of both is exhibited in the following Table, in which 2 other columns ^{have} been introduced, to shew the great increase in the rise of the river, after it arrives within the influence of the tides from which point it gradually diminishes, until all difference finally disappears, at its confluence with the ocean. —

Table of the Gradual increase of the Ganges, as shewn at Ghazipoor, at Jellinghy, at Sacca, and at Luckipoor, (on the Megra.)

Ghazipoor (in 1815).	Jellinghy	Sacca	Luckipoor.
p. 1.	p. 1	p. 1	p. 1
In May it rises ... 0 0	May ... 6 0	May ... 2 4	May ... 1
— June ... 11 5	June ... 9 6	June ... 4 6	June ... 1 9
— July ... 6 7	July ... 12 6	July ... 5 6	July ... 2 6
— August (from 1 st to 14 th) ... 14 0	August (1 st to 14 th) ... 4 0	August (1 st to 14 th) ... 1 11	August (1 st to 14 th) ... 0 1
Total 32 0	Total 32 0	Total 14 3	Total 5

It is hoped, that a perusal of the above cursory Remarks, & say, and Table, will induce several more scientific observers than I pretend to be, to step forward and furnish a correct general view of the periodical rise of the Ganges, and its leading branches in different parts of their course, from above the confluence of

the Ganges to the sea; together with a general Table of the tides
throughout the year, combined with an examination into the
causes of their sudden influx, termed the Bore, acting with an
greater or less power, in different outlets of the same river at
the same time - a Phenomenon, the theory of which does not yet
appear to be sufficiently explained or understood. -

Diary
of
The Daily Progressive Rise & Fall of
The Tides -
At the Station of Burhampoor in Bengal
From 1815 to 1822 both years inclusive
By Major Parltby
Bengal Engineers.
With Notes by Capt Lachlan
M. D. M.

May 1815					May 1816					May 1817					
Days	Rise		Fall		Weather &c	Rise		Fall		Weather &c	Rise		Fall		Weather &c
	ft	in	ft	in		ft	in	ft	in		ft	in			
1		1 1/4			Peace in secure. S. Wester almost every night throughout the month, with heavy falls of rain, Wind strong in the day time and constantly varying	Stationary				Fair, but strong winds in the evening. No rain. Exceptional heat Winds South.		1			From the 1st to the 27th Hot winds and a few North Westers, the Wind generally South, to South East.
2				1/4		Le	Le				Stationary				
3				3/4		Le	Le					2			
4		1/2					1/4					1			
5	Stationary					Stationary							1		
6		1/2				Le	Le						1/2		
7		1/4						1/4					1/4		
8	Stationary					Stationary							1/4		
9		1/4				Le	Le						1/4		
10		1/4				Le	Le						1/4		
11	Stationary						1/4				1/2				
12		3/4				1/4				Slight NW 2 hour rain			1/4		
13		1/4			Stationary					Very hot S.E.			1		
14				1/2			1/4						1		
15		1/4			Stationary								3/4		
16	Stationary					1/4				Slight Shower at night			1/2		
17	Le	Le								1/2 very strong Winds in Evening			1/2		
18		1/2			Stationary					light shower afternoon			1/2		
19	Stationary					1/4				hard rain 2 or 3 hours			1		
20		1 1/4				1/4				very hard NW to S.W. 6 o'clock			1 1/2		
21		3/4			Stationary					Fair			2		
22				1/4		1/2				Shower afternoon			1 1/2		
23		1/2				1/4							2		
24		1 1/2					1/2						1/4		
25		1/4			Stationary					Fair - Strong and cold Winds in the evening and all night			1/4		
26				3/4			1/4						1 1/4		
27				1 1/4		1/4				Heavy NW 3 o'clock rain			1/4		
28		1				1/4				Fair	Stationary	Cloudy & Cool			
29				1	Stationary					SW. Breeze, strong wind	Le	Le	Le	Le	
30		1 1/2					1/4						1/2	very heavy Clouds	
31		1/4				1 1/4							Le	Le	
Total Rises 11 3/4						3 3/4		2 1/4		and amount to	1 1/2	9	Rise from 21st to 31st 9 inches		

N.B. Lowest fall of 1814/15, - 15th April { By Level - 32" - 1/2 } Subseq. Rise, 6" 5/8
 Do 1815/16 - 9th Do { By Level - 31" 6 1/2 } Do do 2 3/4
 { By Measure - 30" 9 1/2 }
 Do 1816/17 - 19th May - Measure 31" 5 3/4
 Do 1817/18 - 20th May - Do 32" 2 3/4 - 0
 Do 1818/19 - 22nd May { Level - 31" 3 }
 { Measure - 33" 7 1/4 }
 Do 1819/20 - 20th Apr. - Measure - 31" 7 - Subseq. Rise 6" 1/4
 Do 1820/21 - 12th May { Level - 28" 10 3/4 }
 { Measure - 28" 2 }
 Do 1821/22 - 1st May - { Level - 30" 8 }
 { Measure - 30" 8 }
 For highest rise of corresponding years see page of September.

Remark - To explain the nature of these 2 Measurements, and the reasons of two being taken, it is necessary to remark that besides the daily Register which must always be liable to Errors either of Excess or Defect, from the accidental placid or disturbed state of the Rivers Surface in contact with the water Gauge at the time of observation, another was had recourse to, by way of Check, by occasionally noting the Rise or Fall shown upon the portable Gauge, the ~~step~~ measurement of the Steps composing which had been previously ascertained. In addition to which the greatest Rise & Fall of the Season being carefully noted on this fixed Gauge, ^{and} giving always, a correct maximum & Minimum for each year. - Of the 2 Measurements, that by Level is of course considered the correct one. - The insertion of the other serves to show the liability to error of a moveable Gauge.

June 1815

June 1815

June 1817

Days	Rise		Fall		Weather &c	Rise		Fall		Weather &c	Rise		Fall		Weather &c
	Ft.	In.	Ft.	In.		Ft.	In.	Ft.	In.		Ft.	In.	Ft.	In.	
1		2			S. Wester		1					3			Rain
2		2			do					Stationary		4			very sultry
3		4			Fair				1/2				1/2		do do
4		4			Strong East Winds				1/2				1/2		very hard rain at noon
5		1			do do				1/4				1		Sultry, Wind south
6		4			Calm and hot				1/4						Stationary do do
7		2 1/2			do do		1 1/4					1			frequent hard showers
8		3/4			Rain set in					Stationary		1/4			high Wind E. & rainy
9		2 1/2			Showery		2			Very Sultry		2			do do
10		4			Hard shower in night				3/4						Stationary Showers Wind S.E.
11		2			Cloudy and hot				1/2			2			do do
12					Stationary Showery all day				1/4			5 1/2			do do
13					Cloudy no rain					Stationary		7 1/2			do do
14		3			Constant showers N.W.		1		2			7			do do
15		2 1/4			do do		4			Slight rain in morning		9 1/2			very hard rain at noon
16		2 1/2			do do				1/4			10			very hard showers all day
17		8 3/4			Cloudy no rain		2			N.W. in Evng. hard rain		1 7 1/2			do do
18		16			do do		3 1/4			Rain set in		2 8			Continued Showers
19		1 3/4			Showery S.E.		4			Fair and calm		3 1			very hard rain in Evng.
20		9 1/4			do do		3			Showery		2 1/4			Clear Weather
21		4 1/2			Eclipse, hard rain - night		7			do Wind S.E. & S.W.		1 1/4			do do
22		4 3/4			Showery S.E.		5 3/4			Showers		9			one or two slight showers
23		7			Fair do		8			do do		1			do do Wind S.
24		1			Showery		9 1/2			heavy dr. all day. dr.		1 7			incessant severe rains
25		11			do do		6			dr. in afternoon, S.W. & E.		1 1 1/2			Fair & calm
26		6 3/4			hard rain in the night		4 1/4			Showery, rain at night		8 1/2			Strong Winds & Showery
27		5			Showers. hot		3			Fair Wind S.		1/4			do do
28		1			do do		8 1/4			Constant showers					Stationary do Wind East
29		3 1/2			Hard wind and rain from N.W. from 3 o'clock till evening.		1 3/4			rain almost all day & excessively heavy in the Evng.					heavy rain
30		5 3/4			Fair but Sultry		1 2 1/2			do till 12 o'clock.		5 1/2			do do
						Total fall to 30th June 20. 6 1/2					19 11 1/2 - 1 3/4				

[illegible]

July 1815						July 1816						July 1817					
Date	Rise		Fall		Weather &c		Rise		Fall		Weather &c		Rise		Fall		Remarks
	Ft.	In.	Ft.	In.			Ft.	In.	Ft.	In.			Ft.	In.	Ft.	In.	
1	9 $\frac{1}{2}$						1	4			Wind S.						Very low rain all night
2	9 $\frac{1}{4}$							7 $\frac{1}{2}$			Do						Do so in the morning
3	7							4			Do						Do so in the night
4	1 $\frac{1}{4}$						1	1			Do						hard showers
5	1 $\frac{3}{4}$						2	11			Do						Do Do
6	1 $\frac{1}{2}$						3	$\frac{1}{2}$									Cloudy & hot
7	10 $\frac{1}{2}$						1	10 $\frac{1}{2}$									Do Do
8	9 $\frac{1}{4}$							5									heavy showers, wind W.
9	6 $\frac{1}{2}$									4 $\frac{1}{2}$	N.W.						Fair, wind west
10	6									8 $\frac{1}{2}$	Do						heavy shower from W.
11	6									6	Barthquake at night						Stationary Fair wind, East
12	8									3	N.E.						Do Do
13	6										Stationary						very hard rain from W.
14	1 $\frac{1}{2}$									9 $\frac{1}{2}$	Do						Fine day S.E.
15	3						1	11 $\frac{1}{2}$			Do						Stationary Do Do
16	4							7 $\frac{1}{2}$			Constant rain showers						Do Do
17	2 $\frac{3}{4}$						10				Do S. wind S.E.						Stationary Very high wind
18	3 $\frac{3}{4}$						5				Do Do						Do Do & heavy
19	6						7				Light showers all day						Stationary Less barometer
20	2 $\frac{1}{2}$						10				Do Do						showing
21	1 $\frac{1}{2}$						11				Cloudy no rain						Fair
22	1 $\frac{1}{2}$						7 $\frac{1}{2}$				Do Do						Do Do
23	2 $\frac{1}{2}$						6 $\frac{1}{2}$				heavy clouds & light rain						Do Do
24	1 $\frac{1}{4}$						5 $\frac{1}{2}$				Do rain all day						Do Do
25	Stationary						11 $\frac{1}{4}$				Do Do						receptive heavy rain from E. in the early part of morning
26	1 $\frac{1}{2}$						3 $\frac{1}{2}$				Do with a little wind from E.						showing wind N.E.
27	1						3				Very heavy & afternoon						Fair - S. & S.E.
28	2						3				Clear day						Do Do
29	$\frac{1}{2}$						3 $\frac{1}{4}$				Cloudy but rain all night						very sultry, light rain
30	$\frac{3}{4}$						3 $\frac{1}{4}$				Light rain till 9						Constant heavy rain
31	$\frac{1}{2}$						5 $\frac{1}{2}$				Fair - S.E.						Do Do
	13	7 $\frac{1}{4}$					23	12	1	10	Rise on 15th July 1816, 20" 5 $\frac{1}{4}$.						Rise to 31st July 24" 8 $\frac{1}{2}$

July 1818

July 1819

July 1820

Rise				Remarks	Rise				Remarks	Rise				Remarks
Ht.	ft.	Ht.	ft.		Ht.	ft.	Ht.	ft.		Ht.	ft.	Ht.	ft.	
Wednesday	1	1/2	"	frequent hard showers	Thursday	1	"	"		Wednesday	1	1/2	"	Strong winds from S.W. with occasional hard showers
"	1	2 1/2	"	Do Do	"	3 3/4	"	"		"	1	9	"	"
"	1	3 1/4	"	Do Do	"	9	"	"		"	1	5	"	"
"	1	4 1/4	"	Cloudy & Cool	"	8 1/4	"	"		"	1	3	"	"
"	1	1	"	Very rainy	"	5	"	"		"	"	11	"	Very showery
"	1	1 1/2	"	Constant lower rain	"	4	"	"		"	"	7	"	heavy showers
"	1	4 1/4	"	Do Do	"	2 1/2	"	"		"	"	4 1/2	"	Do Do
"	"	1	"	Cloudy & little rain	"	Stationary	"	"		"	"	3	"	Shower & Cool
"	"	5 3/4	"	Do Do	"	1 1/2	"	"		"	"	1	"	So & light winds S.W. or
"	"	7	"	at 10 o'clock close to another	"	"	"	1/2	Cool and pleasant weather a few showers but not heavy any duration the wind falling from South to East	"	"	Stationary	"	frequent hard showers
"	"	8 3/4	"	"	"	"	"	1		"	"	2 1/2	"	Do wind S.W.
"	"	8 1/2	"	Constant shower and frequently any hard winds S.W. & S.E.	"	1	"	"	Do Do	"	"	5 1/4	"	Do Do Do
"	"	9	"		"	2 1/4	"	"	Do Do	"	"	5 1/4	"	"
"	"	5 1/2	"		"	1	"	"	Do Do	"	"	7 1/2	"	"
"	"	3	"		"	3 1/4	"	"	Strongest wind & showery	"	"	9 3/4	"	"
"	"	4 1/2	"	"	"	2	"	"	Very strong & rainy	"	"	3	"	"
"	"	Stationary	"	Do	"	3 1/2	"	"	Do Do Do	"	"	2	"	"
"	"	"	1/2	Do	"	3	"	"	Do Do Do	"	"	3 1/2	"	"
"	"	"	4 1/4	Do	"	1	"	"	Mon moderate	"	"	6	"	Showerly S.W.
"	"	"	4 3/4	from S.W. & S.E.	"	1/4	"	"	S.W. wind & S.E. showery	"	"	5 1/2	"	light showers Do
"	"	"	1/2	exception rain & rain	"	"	"	1		"	"	5 1/4	"	Do Do
"	"	"	2 3/4	Cloudy no rain	"	"	"	1 1/4		"	"	3 1/4	"	Do Do
"	"	"	5 1/4	Do Do	"	1/4	"	"		"	"	1 1/4	"	Cloudy & cool no rain
"	"	"	4 1/2	rain in the evening	"	3 1/4	"	"		"	"	Stationary	"	showery
"	"	"	3 1/4	Soale the morning	"	4 1/2	"	"		"	"	"	1/4	showery day & rain
"	"	"	2 1/2	Very hard showers	"	3 1/4	"	"		"	"	"	1/4	showery
"	"	"	2 1/4	Constant Do	"	3 1/4	"	"		"	"	2	"	Very fine day
"	"	"	4 1/4	Do Do	"	4	"	"		"	"	2 1/4	"	showery
"	"	"	7 1/2	Intermittent rain	"	6	"	"		"	"	2	"	heavy rain afternoon
"	"	"	9	Exception rain in morning	"	7	"	"		"	"	1 3/4	"	heavy showers
"	"	"	10 3/4	but fair in afternoon	"	7 1/4	"	"		"	"	2	"	Do Do
"	"	"	11		"	8	"	3 3/4	Total Rise 63 1/4 July 19-1818	"	"	3 8 1/2	"	July 26-1820

Fine weather in end of week but not frequent showers but and hard

During these days frequent hard showers & strong winds from S.W. & S.E.

August 1815				August 1816				August 1817					
rise		fall	Remarks	rise		fall	Remarks	rise		fall	Remarks		
4th	hr	4th		hr	4th	hr		4th	hr	4th		hr	
1	"	1/2	"	frequent showers in the day	"	1	"	occasional showers	"	6	"	clear wind & transp.	
2	"	"	"	hard showers & wind variable	"	2	"	Fair & Calm	"	6	"	Very strong wind & showers	
3	"	"	"	1/4 light showers East	Stationary	do	do	do	"	3 1/2	"	Fair & Calm	
4	"	5 1/2	"	Rain all night	"	"	"	1 clear & fine day	"	4 1/2	"	Very rainy day & S.	
5	"	8	"	heavy showers East	"	"	"	3 1/2 do do wind E S E	"	1 1/2	"	do do	
6	"	4 1/2	"	light shower all day	"	"	"	3 Showery wind E	"	1 1/2	"	Fair	
7	"	8 1/2	"	Fair wind S S W	"	"	"	3 1/2 do do	"	1 3/4	"	do Wind S	
8	"	5	"	do West & S S W	"	"	"	3 S Strong wind & showers	"	2	"	do do	
9	"	3 1/2	"	absent on the Munday -	"	"	"	2 1/2 do do no rain	"	2 1/2	"	do do	
10	"	2 1/2	"		"	"	"	"	3 1/4 do do do	"	3	"	Rain all day & severe
11	"	2 1/2	"		"	"	"	"	2 1/2 Fine day & S	"	2 1/2	"	frequent rain
12	"	3	"		"	"	"	"	3 1/2 do do	"	4 1/2	"	occipine heavy do
13	"	3 1/2	"	absent on the Munday -	"	"	"	2 1/2 hard rain in do	"	3	"	do at night	
14	"	2 1/2	"		Stationary	showery & strong wind	"	2 1/2	do do do	"	2 1/2	"	do Cloud & night
15	"	3	"		Cloudy hard rain at night	"	do	do	2 1/2 do do do	"	2 1/2	"	Fair & Calm
16	"	2 1/2	"		Fair wind & S W	"	2 1/2	"	Fair day	"	1 1/2	"	do do
17	"	1 1/2	"	Sultry	"	1 1/2	"	do do	"	"	"	2 1/2 hard rain at night	
18	"	3 1/2	"	Clear day & fine S S W	"	1 1/2	"	do do	"	"	"	2 Cloudy	
19	"	"	"	1/2 Very Sultry & rain at night	"	1 1/2	"	do do	"	"	"	4 1/2 Fair & sunnighet	
20	"	"	"	1 1/2 Clear & Sultry	"	1 1/2	"	do do	"	"	"	2 do do do	
21	"	"	"	1/2 Sultry rain at night	"	3 1/2	"	do do	"	"	"	3 1/2 do do	
22	"	"	"	3 1/4 do do do	"	1 1/2	"	showery	"	"	"	2 1/2 do do	
23	"	"	"	3 1/4 Fair shower in afternoon	"	2 1/2	"	very hard rain at night	"	"	"	2 1/2 Very Sultry	
24	"	"	"	3 1/2 Very hard rain from 1 till 8	"	3	"	rainy day	"	"	"	2 1/2 Cloudy	
25	"	"	"	1 frequent hard showers	"	4	"	do wind S S W	"	"	"	3 1/2 do & rain in morning	
26	"	"	"	3 1/2 Very heavy rain afternoon	"	3	"	hard rain wind do	"	"	"	4 do hard in the Court	
27	"	1 1/4	"	hard showers S S W	"	2	"	cloudy do do	"	"	"	5 Cloudy & hot	
28	"	1/2	"	do do do	"	2 1/2	"	do & light showers	"	"	"	5 do do	
29	"	1/2	"	do do do	"	2 1/2	"	Fair wind & S S W	"	"	"	6 hard showers at night	
30	"	Stationary	Clear day no rain	"	3 1/4	"	"	do do	"	"	"	5 frequent do all day	
31	"	"	"	3 1/4 do	"	1	"	do do	"	"	"	5 do do	
4	8	11 1/2			2	11 1/2	2	4 1/2		4	7 1/2	4 1/2	

August 1818				August 1819				August 1820			
Rise	Fall	Remarks		Rise	Fall	Remarks		Rise	Fall	Remarks	
ft	in	ft	in	ft	in	ft	in	ft	in	ft	in
" 5 "	" "	Raining		" under	" "	occasional showers but no continued heavy rain		" Sunday	" "	Showery	
" Stationary	" "	do		" 5 1/2 "	" "			" 1 "	" "	hard rain at night	
" " 1 "	" "	hard do at night		" 2 "	" "			" 1 "	" "	light shower	
" " 1 1/2 "	" "	Fair		" " " 1 1/2 "	" "			" 1 1/2 "	" "	do wind S by E	
" " " 1/2 "	" "	do		" " " 2 1/4 "	" "			" 1 1/2 "	" "	Showery do	
" " " 1 "	" "	do		" " " 1 1/4 "	" "			" 1 3/4 "	" "	Cloudy high raining	
" " " 1 1/4 "	" "	occasional showers but no continued rain		" 1 1/2 "	" "			" 2 "	" "	do do	
" " " 1 1/4 "	" "			" 3 1/4 "	" "			" 1 1/2 "	" "	do do	
" " " 2 "	" "			" 5 1/4 "	" "			" 2 1/4 "	" "	Cloudy no rain	
" " " 1 1/4 "	" "			" 6 "	" "			" 2 1/2 "	" "	do do	
" " " 2 1/2 "	" "			" 4 1/2 "	" "			" 3 "	" "	do & cool	
" " " 2 1/4 "	" "	occasional showers but no continued rain		" 1 1/2 "	" "			" 2 1/2 "	" "	Fair day	
" " " 3 1/4 "	" "			" 1 1/4 "	" "			" 2 1/2 "	" "	do	
" " " 4 "	" "			" " " 2 "	" "			" 2 1/2 "	" "	do	
" " " 5 "	" "			" " " 1 1/4 "	" "			" 1 1/2 "	" "	do	
" " " 4 1/2 "	" "			" " " 1 1/4 "	" "			" 1 1/4 "	" "	Extreme heat	
" " " 3 "	" "	Moderate & East		" 1 1/2 "	" "	Moderate weather & frequent showers wind S to S.E.		" 1 1/2 "	" "	do particularly at night	
" " " 1 "	" "	do		" 1 "	" "			" 1 1/2 "	" "	Sun Day Cool in Evening Gale & wind from N.E. till 2 o'clock	
" 1 1/2 "	" "	great heat		" 1 "	" "			" 1 1/4 "	" "	do in morning	
" 4 "	" "	do do		" 2 1/2 "	" "			" 1 1/2 "	" "	Fair & Calm	
" 3 "	" "	Clear & Cool		" 5 "	" "			" 1/2 "	" "	do do S by E	
" 3 1/4 "	" "	Sultry		" 6 "	" "			" " " 1/2 "	" "	occasional heavy rain from 1 to 2 o'clock	
" 4 1/2 "	" "	Cloudy		" 2 1/4 "	" "	Showery		" " " 1 1/2 "	" "	Cloudy & sultry	
" 3 1/2 "	" "	Light Showers & heat		" 4 1/2 "	" "	do		" " " 1 "	" "	do do	
" 3 "	" "	occasional showers from 2 to 3 but generally & cool		" 8 1/2 "	" "			" " " 1 1/2 "	" "	Strong Gale from N.W. to East	
" 2 "	" "			" 1 1/4 "	" "			" " " 3 "	" "	do do do Showery	
" 1 1/4 "	" "			" 6 1/2 "	" "			" " " 2 1/4 "	" "	Cloudy & Windy & by S	
" 1 1/2 "	" "			" 6 1/4 "	" "			" " " 2 1/2 "	" "	do do S by E	
" 1 "	" "			" 9 1/2 "	" "			" " " 2 1/2 "	" "	Cloudy Windy & by E	
" " " 1 1/4 "	" "	occasional showers from 2 to 3 but generally & cool		" 8 1/2 "	" "			" " " 1 1/2 "	" "	Stationary do do do	
" " " 1 "	" "			" 7 "	" "			" " " "	" "	Total Rise to 31 1/2 inches	
" " " "	" "			" 9 1/2 "	" "			" " " "	" "	2 " 11 1/4 "	
" " " "	" "			" 9 1/2 "	" "			" " " "	" "		
" " " "	" "			" 9 1/2 "	" "			" " " "	" "		

September 1815				Sept. 1816				Sept. 1817.			
Days	Rise		Remarks	Days	Rise		Remarks	Days	Rise		Remarks
	ft	in			ft	in			ft	in	
1	"	"	Constant hard Showers particularly in the night. wind variable	1	"	"	Very sultry wind w	1	"	"	Shawery
2	"	"		2	"	"	Do NW	2	"	"	Do Do
3	"	"		3	"	"	Do Do	3	"	"	occasional rain more
4	"	"		4	"	"	Do Do	4	"	"	Shawery
5	"	"		5	"	"	Cloudy S B in Evng	5	"	"	Do strong East wind
6	"	"		6	"	"	Do & Thunder Do	6	"	"	Shawery
7	"	"		7	"	"	hard rain at 1/2 past 2	7	"	"	Do East
8	"	"		8	"	"	Very hard East g oblock	8	"	"	frequent Showers
9	"	"	Very sultry & calm	9	"	"	Sultry & calm	9	"	"	Very hard S & D
10	"	"	Fair day	10	"	"	Do	10	"	"	Constant Showers
11	"	"	Do & calm	11	"	"	Do	11	"	"	Do & rain at night
12	"	"	Do	12	"	"	Do	12	"	"	Do
13	"	"	Do	13	"	"	Do	13	"	"	Do
14	"	"	Do	14	"	"	Do	14	"	"	Do
15	"	"	Do	15	"	"	Do	15	"	"	Do
16	"	"	Do	16	"	"	Do	16	"	"	Do
17	"	"	Do	17	"	"	Do	17	"	"	Do
18	"	"	Do	18	"	"	Do	18	"	"	Do
19	"	"	Do	19	"	"	Do	19	"	"	Do
20	"	"	Do	20	"	"	Do	20	"	"	Do
21	"	"	Do	21	"	"	Do	21	"	"	Do
22	"	"	Do	22	"	"	Do	22	"	"	Do
23	"	"	Do	23	"	"	Do	23	"	"	Do
24	"	"	Do	24	"	"	Do	24	"	"	Do
25	"	"	Do	25	"	"	Do	25	"	"	Do
26	"	"	Do	26	"	"	Do	26	"	"	Do
27	"	"	Do	27	"	"	Do	27	"	"	Do
28	"	"	Do	28	"	"	Do	28	"	"	Do
29	"	"	Do	29	"	"	Do	29	"	"	Do
30	"	"	Do	30	"	"	Do	30	"	"	Do
31	"	"	Do	31	"	"	Do	31	"	"	Do

NB. Highest Rise of 1814 - in 17th Sept. - by Measurement - 34" 4 3/4 -			
Do	1815	14th Aug -	Do - 30" 1 1/2 -
Do	1816	30th Sept -	Do - 31 - 3/4 -
Do	1817	16th Aug -	Do - 31 8 3/4 -
Do	1818	28th Sept -	Do - 31 - 3 3/4 -
Do	1819	29th Do	Do - 31 - 6 -
Do	1820	21st Aug -	Do - 29" 5 1/4 -
Do	1821	6th Sept -	Do - 30 - 2 1/4 -
Do	1822	26th Aug -	Do - 29 - 8 -

- being $3'' 6\frac{3}{4}$ higher than 1813.
after which fell $7\frac{1}{2}$ in. by 1st Sept.
after which fell $4'' 4\frac{3}{4}$ by 1st Sept.
- after which fell $1'' 5\frac{1}{2}$ by 1st Sept.
after which fell 6 inches to 1st Sept.

October 1815

October 1816

October 1817

Day	rise		fall		Remarks	Day	rise		fall		Remarks	Day	rise		fall		Remarks
	ft	in	ft	in			ft	in	ft	in			ft	in	ft	in	
1	"	"	"	2	Clear & hot with occasional hard showers & variable winds	1	"	1/2	"	"	highest rise this year 35-42	1	"	"	3 3/4	"	low rain afternoon
2	"	"	"	2 1/4		2	"	"	"	5 1/4	Very hot in the day variable but latterly a S.W. & North West	2	"	"	3	"	Do in Evening
3	"	"	"	3 1/4		3	"	"	"	7		3	"	"	1	"	Cloudy
4	"	"	"	3 1/2		4	"	"	"	7 1/4		4	"	"	1 3/4	"	Fair
5	"	"	"	4 1/2		5	"	"	"	5 3/4		5	"	"	1 1/4	"	Do
6	"	"	"	4		6	"	"	"	5 3/4		6	"	"	2 1/4	"	Very hot
7	"	"	"	4 1/2	Fine day	7	"	"	"	6		7	"	"	2 1/2	"	Do Do
8	"	"	"	4 1/4	Do Do	8	"	"	"	5		8	"	"	2 3/4	"	Do Do
9	"	"	"	4	Do Do	9	"	"	"	3 1/2		9	"	"	2 1/4	"	Temperate wind S.W.
10	"	"	"	5 1/4	Light rain	10	"	"	"	4 3/4		10	"	"	5 1/2	"	Fair in hot in the day, but cool night & morning
11	"	"	"	5 1/4	Fine day	11	"	"	"	4 1/2	Returned from Hooley	11	"	"	6	"	
12	"	"	"	5 1/4	Do morning cold	12	"	"	"	8 1/2	Clear weather but when weather cool in the morning, and evening the wind blowing from S.W. to North from the	12	"	"	6	"	
13	"	"	"	6	Do Do	13	"	"	"	10		13	"	"	5 3/4	"	
14	"	"	"	6 1/4	Do Do	14	"	"	"	10 1/4		14	"	"	5 1/2	"	
15	"	"	"	6	Do Do	15	"	"	"	10 3/4		15	"	"	6	"	Fair in hot in the day, but cool night & morning
16	"	"	"	5	Rain hard at night	16	"	"	"	11 1/4		16	"	"	5	"	
17	"	"	"	6	Fair Wind from N.W.	17	"	"	"	10		17	"	"	5	"	Very Cloudy
18	"	"	"	5 3/4	Do Do	18	"	"	"	10 1/2		18	"	"	2 3/4	"	Rainy
19	"	"	"	5 3/4	Do Do	19	"	"	"	8 3/4		19	"	"	2 1/2	"	Do
20	"	"	"	6	Frequent Rain	20	"	"	"	8 1/4		20	"	"	4 1/4	"	Cloudy
21	"	"	"	6 1/4		21	"	"	"	7 1/2		21	"	"	3	"	Do
22	"	"	"	6 1/2		22	"	"	"	7 1/2		22	"	"	5 1/4	"	Very heavy rain
23	"	"	"	6 1/2		23	"	"	"	7		23	"	"	5	"	Cloudy
24	"	"	"	6 1/2		24	"	"	"	7		24	"	"	7 1/4	"	Rainy
25	"	"	"	5 1/4		25	"	"	"	6 1/2		25	"	"	4	"	Heavy
26	"	"	"	4 1/2		26	"	"	"	5 1/2		26	"	"	5	"	Very hot
27	"	"	"	4 1/4		27	"	"	"	6		27	"	"	5 3/4	"	Sultry & Cloudy
28	"	"	"	4 3/4		28	"	"	"	5 1/2		28	"	"	2 3/4	"	Do Do
29	"	"	"	4 3/4		29	"	"	"	5 1/4		29	"	"	5	"	Do
30	"	"	"	4 1/4	Frequent Rain	30	"	"	"	5 1/2	Clear & hot weather but when weather cool in the morning, and evening the wind blowing from S.W. to North from the	30	"	"	4 1/2	"	excessive heavy rain
31	"	"	"	4 1/4		31	"	"	"	4 3/4		31	"	"	4 1/2	"	Clear but hot
129 3/4						12 1/2 18 4 3/4						10 5 1/2 3 1/2 18.9 1/2					31st Oct. 18.9 1/2

October 1818

October 1819

October 1820

October 1819						October 1820					
rise	fall	Remarks	rise	fall	Remarks	rise	fall	Remarks	rise	fall	Remarks
ft	in		ft	in		ft	in		ft	in	
Thursday	12	heavy showers	Friday	5	Occasional hard Showers	Friday	12	heavy clear weather			
"	1	do do night	"	5		"	12	do do			
"	1	Slighter Shower	"	5 1/2		"	2	do do			
"	1	Very severe Showers	"	4 1/2		"	4 1/2	light Showers			
"	1 1/4	do do	"	4 1/2		Strong East wind all day	"	5	showery		
"	1 1/2	do do	Saturday		heavy rains day & night	"	3	do heavy & by P.			
"	4	hard & early in morning	3		do do	"	4 1/2	Fine day P.M.			
"	4	Fair	3		do till noon	"	2	driving strong all night			
"	4 1/2	do			how it rains on heap.	"	2	hard Showers P.M.			
"	4 1/4	do Wind W & S.W.			fine clear weather	"	3	do			
"	6 1/4	do do			do Wind W & S.W.	"	3 1/4	fine weather			
"	6	do do			do	"	1 1/4	do do			
"	6	do do			do	"	2 1/4	hard Showers & by W.			
"	6	very tempestuous, after			do	"	3 1/4	Fine day			
"	6	the W. & S.W. rain			do	"	3	Nathn. Cloudy & warm			
"	9 1/2	Cloudy & Showery, & rain			do	"	5	Fine clear day			
"	7 3/4	Fair			do	"	5	do but hot W.			
"	8	do			do	"	5 1/2	do do S.W.			
"	8 1/2	do			do	"	5	do do do			
"	8 1/4	do Wind north			do	"	5	do do do			
"	8 1/2	do N.W.			do	"	5 1/2	do do do			
"	9 1/2	do do			do	"	5	do do do			
"	8 1/2	do do			do	"	5 1/2	do do do			
"	8 1/4	do do			do	"	6	do do do			
"	8 1/2	do do			do	"	5	do do do			
"	8	Cloudy			do	"	5	do do do			
"	8	Fair & warm			do	"	1 1/4	do do do			
"	7 3/4	do do			do	"	5	do do do			
"	7	do do			do	"	4	do do do			
"	7	do do			do	"	4	do do do			
"	7	do & Cool			do	"	3 1/2	do do do			
"	6 1/2	do do			do	"	3	do do do			
15 1/2			8 1/2	10 1/2	Total fall is 31 1/2	9	9	Total fall is 31 1/2			
					see 14 & 11 1/2			16 & 5 1/4			

fine weather cool
at night till dawn rise
winds S.W. to N.W.

Morning & Evening Cool
but hot in the day time
& the wind light and
very weather -

November 1815

Days	Rise		Fall		Remarks
	ft	in	ft	in	
1	Wednesday		2 3/4		
2	"	"	"	4	
3	"	"	"	4	
4	"	"	"	3 1/4	
5	"	"	"	3 1/2	
6	"	"	"	1 1/4	
7	"	"	"	2 1/2	
8	"	"	"	1	
9	"	"	"	2 1/4	
10	"	"	"	2 3/4	
11	"	"	"	2 1/4	
12	"	"	"	3 1/2	
13	"	"	"	3 1/4	
14	"	"	"	3	
15	"	"	"	2 3/4	
16	"	"	"	3 1/4	
17	"	"	"	2 1/4	
18	"	"	"	2 1/2	
19	"	"	"	2	
20	"	"	"	1 1/2	
21	"	"	"	2 1/2	
22	"	"	"	2 1/4	
23	"	"	"	2	
24	"	"	"	2	
25	"	"	"	1 3/4	
26	"	"	"	2 1/4	
27	"	"	"	1 3/4	
28	"	"	"	2	
29	"	"	"	1 3/4	
30	"	"	"	2	

November 1816

Days	Rise		Fall		Remarks
	ft	in	ft	in	
1	Friday		3 1/2		
2	"	"	"	3 1/2	
3	"	"	"	3 1/2	
4	"	"	"	4 1/4	
5	"	"	"	3 1/2	
6	"	"	"	3 1/2	
7	"	"	"	2 3/4	
8	"	"	"	3	
9	"	"	"	2 1/4	
10	"	"	"	2 3/4	
11	"	"	"	2 1/2	
12	"	"	"	2 1/4	
13	"	"	"	2	
14	"	"	"	2 1/4	
15	"	"	"	2 1/2	
16	"	"	"	2 1/2	
17	"	"	"	2 1/2	
18	"	"	"	2 1/2	
19	"	"	"	3 1/4	
20	"	"	"	3	
21	"	"	"	2 3/4	
22	"	"	"	2 3/4	
23	"	"	"	2 1/2	
24	"	"	"	3	
25	"	"	"	3	
26	"	"	"	2 1/4	
27	"	"	"	2 1/2	
28	"	"	"	2 1/4	
29	"	"	"	2	
30	"	"	"	2 1/4	

November 1817.

Days	Rise		Fall		Remarks
	ft	in	ft	in	
1	Saturday		4 1/2		
2	"	"	"	6	
3	"	"	"	5 1/2	
4	"	"	"	5 1/4	excepting Fog
5	"	"	"	4 1/4	
6	"	"	"	4 1/2	
7	"	"	"	5	
8	"	"	"	4	
9	"	"	"	4 1/2	
10	"	"	"	4 1/4	
11	"	"	"	5	
12	"	"	"	3	
13	"	"	"	2 3/4	
14	"	"	"	2 1/2	
15	"	"	"	2 3/4	
16	"	"	"	3	
17	"	"	"	2	
18	"	"	"	4 1/4	
19	"	"	"	1	
20	"	"	"	3/4	
21	"	"	"	1	
22	"	"	"	1 1/4	very much thunder & rain in the night
23	"	"	"	3/4	
24	"	"	"	1	
25	"	"	"	1 1/2	
26	"	"	"	1	
27	"	"	"	1 1/4	
28	"	"	"	1 1/2	
29	"	"	"	1 1/4	
30	"	"	"	1	

Variable Winds and Weather throughout the Month

Constant fair & cool weather -
Varying from N.E. to S.W.

Variable Winds &
Cool morning & night -

6 1/2

7 1/2

7 1/4

Total fall 73 ft
Nov. 25 - 4 3/4

Total fall 73 ft
Nov. 25 - 4 3/4

Total fall 73 ft
Nov. 25 - 4 3/4

November 1878.

[illegible]

November 1819.

[illegible]

November 1820.

[illegible]

December 1815					December 1816.					December 1817.							
Days	Rise		fall		Remarks	Rise		fall		Remarks	Rise		fall		Remarks		
	ft	in	ft	in		ft	in	ft	in		ft	in	ft	in			
1	"	"	"	2 3/4	Fair and Cold weather many frost the month. Wind from S.W. to N.W.	evening		1 1/2		Fair and Cold weather many frost the month. Wind W. & S.W. to N.W.	Monday		1 1/4		Temperate all thro' the month. Wind varying from S.W. to S.E.		
2	"	"	"	4		"	"	"	1 1/4			"	"	"		1 1/4	
3	"	"	"	4		"	"	"	1			"	"	"		2	
4	"	"	"	3 3/4		"	"	"	1 1/4			"	"	"		1 3/4	
5	"	"	"	3 1/2		"	"	"	1 3/4			"	"	"		1 1/2	
6	"	"	"	1 1/4		"	"	"	1 3/4			"	"	"		1 1/4	
7	"	"	"	2 1/2		"	"	"	2			"	"	"		1 1/4	
8	"	"	"	4		"	"	"	1 1/2			"	"	"		1	
9	"	"	"	3 1/4		"	"	"	1 1/4			"	"	"		1 1/2	
10	"	"	"	3 1/2		"	"	"	1			"	"	"		1 1/4	
11	"	"	"	2 1/4		"	"	"	1 3/4			"	"	"		1 1/2	
12	"	"	"	3 1/2		"	"	"	1 1/2			"	"	"		1 1/4	
13	"	"	"	3 1/4		"	"	"	1 1/4			"	"	"		1	
14	"	"	"	3		"	"	"	1 1/2			"	"	"		2	
15	"	"	"	2 3/4		"	"	"	1 1/4			"	"	"		1 3/4	
16	"	"	"	3 1/4		"	"	"	1			"	"	"		1 1/2	
17	"	"	"	2 1/4		"	"	"	1			"	"	"		1	
18	"	"	"	2 1/2		"	"	"	1 1/4			"	"	"		1 1/4	
19	"	"	"	2		"	"	"	3/4			"	"	"		1	
20	"	"	"	1 1/2		"	"	"	1/2			"	"	"		1 1/2	
21	"	"	"	2 1/2		"	"	"	1 1/2			"	"	"		1 1/4	
22	"	"	"	2 1/4		"	"	"	1			"	"	"		1 1/4	
23	"	"	"	2		"	"	"	1 1/4			"	"	"		1 1/4	
24	"	"	"	2		"	"	"	3/4			"	"	"		1	
25	"	"	"	1 3/4		"	"	"	1			"	"	"		1	
26	"	"	"	2 1/4		"	"	"	3 1/4			"	"	"		1 1/2	
27	"	"	"	1 3/4		"	"	"	1 1/2			"	"	"		1 1/4	
28	"	"	"	2		"	"	"	1 1/2			"	"	"		1	
29	"	"	"	1 1/4		"	"	"	3/4			"	"	"		1	
30	"	"	"	2		"	"	"	1 1/2			"	"	"		1	
31	"	"	"	"		"	"	"	3/4			"	"	"		3 1/4	
Total fall from 18th					Total fall to 31st of Dec.	Total fall to 31st					Total fall 31st Dec.						
2 11 1/2						28 1/2					29 2 3/4						
27 6 1/2																	

N.B. 1815

December 1898					December 1899.					December 1820.				
Rise	fall		Remarks		Rise	fall		Remarks		Rise	fall		Remarks	
$\frac{1}{4}$ h	$\frac{1}{4}$ h	$\frac{1}{4}$ h			$\frac{1}{4}$ h	$\frac{1}{4}$ h	$\frac{1}{4}$ h			$\frac{1}{4}$ h	$\frac{1}{4}$ h	$\frac{1}{4}$ h		
Tuesday		$\frac{1}{2}$	Fair weather but warm for the season - wind constantly varying		wednesday		3	Fair weather though hot the month, wind varying from N. to S.W. - Two or three cloudy days but no rain		Friday		1	Cold & fair	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{4}$			"	"	1	Do Do	-
"	"	$\frac{3}{4}$			"	"	$2\frac{1}{2}$			"	"	$1\frac{1}{4}$	Do Do	-
"	"	2			"	"	2			"	"	$\frac{1}{2}$	Cloudy & damp cold	-
"	"	$\frac{1}{2}$			"	"	$2\frac{1}{2}$			"	"	1	Do Do	-
"	"	$\frac{3}{4}$			"	"	2			"	"	$\frac{3}{4}$	Clear weather	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{4}$			"	"	1	Do but Sun hot	-
"	"	2			"	"	$2\frac{1}{4}$			"	"	$1\frac{1}{4}$	Wind varying	-
"	"	$\frac{1}{4}$			"	"	2			"	"	$\frac{1}{2}$	Cool w to SW	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{2}$			"	"	1	Do Do	-
"	"	$\frac{1}{4}$	Fair and generally warm in the day - Fair & sometimes cold wind from S.W. to S.E.		"	"	$2\frac{1}{4}$	Fair weather though hot the month, wind varying from N. to S.W. - Two or three cloudy days but no rain		"	"	$\frac{3}{4}$	Do Do	-
"	"	1			"	"	2			"	"	1	Do Do	-
"	"	$\frac{3}{4}$			"	"	2			"	"	$1\frac{1}{4}$	Do Do	-
"	"	1			"	"	2			"	"	1	Do Do	-
"	"	$\frac{1}{2}$			"	"	$2\frac{1}{4}$			"	"	$\frac{1}{2}$	Do Do	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{2}$			"	"	$\frac{1}{4}$	Do Do	-
"	"	$\frac{1}{2}$			"	"	2			"	"	1	Do Do	-
"	"	$\frac{3}{4}$			"	"	$2\frac{1}{4}$			"	"	$1\frac{1}{4}$	very cold day & NW	-
"	"	$\frac{1}{4}$			"	"	$1\frac{3}{4}$			"	"	$\frac{3}{4}$	Clear & cold Do	-
"	"	1			"	"	2			"	"	1	Do Do	-
"	"	$\frac{1}{4}$	Fair and generally warm in the day - Fair & sometimes cold wind from S.W. to S.E.		"	"	$2\frac{1}{2}$	Fair weather though hot the month, wind varying from N. to S.W. - Two or three cloudy days but no rain		"	"	$\frac{3}{4}$	Do Do	-
"	"	$\frac{1}{2}$			"	"	$2\frac{1}{2}$			"	"	1	Do Do	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{4}$			"	"	$\frac{3}{4}$	Do Do	-
"	"	1			"	"	2			"	"	$\frac{1}{2}$	Do Do	-
"	"	$\frac{3}{4}$			"	"	$2\frac{1}{2}$			"	"	$\frac{1}{4}$	rain at the post 10 night	-
"	"	$\frac{1}{4}$			"	"	$2\frac{1}{2}$			"	"	1	Cloudy	-
"	"	$\frac{1}{2}$			"	"	$2\frac{1}{4}$			"	"	$1\frac{1}{4}$	Do Do	-
"	"	1			"	"	$2\frac{1}{2}$			"	"	1	Fair & cold	-
"	"	$\frac{1}{4}$			"	"	$2\frac{3}{4}$			"	"	$\frac{3}{4}$	Do Do	-
"	"	1			"	"	$2\frac{1}{2}$			"	"	1	Do Do	-
"	"	$\frac{1}{4}$	Fair and generally warm in the day - Fair & sometimes cold wind from S.W. to S.E.		"	"	$2\frac{1}{4}$	Fair weather though hot the month, wind varying from N. to S.W. - Two or three cloudy days but no rain		"	"	$\frac{3}{4}$	Do Do	-
3		$5\frac{3}{4}$			"		$5\frac{1}{4}$			"		$2\frac{1}{4}$	Some fall is 31 st Dec. 24. $6\frac{3}{4}$	-

January 1816					January 1817					January 1818				
Day	rise		fall		Remarks	Day	rise		fall	Remarks	Day	rise		Remarks
	At	To	At	To			At	To	At	To		At	To	
1	Monday		1		Fair & very cold. Wind S.W.	Wednesday			1/2		Thursday			1/2
2	"	"	"	1	Do Do				1/2		"	"	"	1/2
3	"	"	"	3/4	Do Do				3/4		"	"	"	1/2
4	"	"	"	1/4	Do Do				1/2		"	"	"	1/2
5	"	"	"	1	Do Do				3/4		"	"	"	1/2
6	"	"	"	1/4	Do Do				1/2		"	"	"	1/2
7	"	"	"	1/2					1/2		"	"	"	1/2
8	"	"	"	1					1/2		"	"	"	1/2
9	"	"	"	3/4					1/2		"	"	"	1/2
10	"	"	"	1/2					1/4		"	"	"	1/4
11	"	"	"	1/4					1/4		"	"	"	1/4
12	"	"	"	1/2	Thurs 60				1/2		"	"	"	1/4
13	"	"	"	1/2					1/4		"	"	"	1/4
14	"	"	"	3/4					1/4		"	"	"	1/4
15	"	"	"	1/2					1/4		"	"	"	1/2
16	"	"	"	1/2					1/2		"	"	"	1/2
17	"	"	"	1/2	Mild - cold S.W.				1/2		"	"	"	1/4
18	"	"	"	1/2					1/2		"	"	"	1/4
19	"	"	"	1/2					1/2		"	"	"	1/2
20	"	"	"	1/2					1/2		"	"	"	1/2
21	"	"	"	1/2					1/2		"	"	"	1/2
22	"	"	"	1/2					1/2		"	"	"	1/2
23	"	"	"	1/4					1/2		"	"	"	1/4
24	"	"	"	1/2					1/4	hard snow & wind	"	"	"	1/2
25	"	"	"	1/2					1/2	went away	"	"	"	1/4
26	"	"	"	3/4	Thurs 60				1/2		"	"	"	1/2
27	"	"	"	1/2					1/2		"	"	"	1/2
28	"	"	"	1/2					1/2		"	"	"	1/4
29	"	"	"	1/2					1/2		"	"	"	1/4
30	"	"	"	1/4					1/2		"	"	"	1/4
31	"	"	"	1/2					1/2	Total fall 3 1/2	"	"	"	1/4
				1 6 3/4					1 2 1/2	Jan. 29. 7 - -				Total fall 30 31 - Jan. 30 - 2

January 1829.					January 1822					January 1821.				
Rise		fall		Remarks	Rise		fall		Remarks	Rise		fall		Remarks
h	m	h	m		h	m	h	m		h	m	h	m	
Friday					Saturday					Sunday				
"	"	"	1/2		"	"	"	2		"	"	"	1	
"	"	"	1/4		"	"	"	2 1/2		"	"	"	1 1/4	
"	"	"	3/4		"	"	"	2		"	"	"	3/4	
"	"	"	1		"	"	"	2		"	"	"	1/2	
"	"	"	1/2		"	"	"	2 1/4		"	"	"	3/4	
"	"	"	1/4		"	"	"	2		"	"	"	1	
"	"	"	1/2		"	"	"	1 3/4		"	"	"	1 1/4	
"	"	"	1 1/4		"	"	"	1 1/2		"	"	"	1	
"	"	"	3/4		"	"	"	1 1/2		"	"	"	3/4	
"	"	"	1 1/4		"	"	"	1 1/4		"	"	"	3/4	
"	"	"	1		"	"	"	1 1/4		"	"	"	1/2	
"	"	"	1 1/4		"	"	"	1		"	"	"	1 1/4	
"	"	"	1 1/2		"	"	"	3/4		"	"	"	1/2	
"	"	"	1 1/4		"	"	"	1/2		"	"	"	1/2	
"	"	"	1		"	"	"	1/2		"	"	"	1/2	
"	"	"	1		"	"	"	3/4		"	"	"	3/4	
"	"	"	1 1/4		"	"	"	1/2		"	"	"	1	
"	"	"	1 1/2		"	"	"	1/2		"	"	"	1/2	
"	"	"	1 1/4		"	"	"	3/4		"	"	"	1/4	
"	"	"	1		"	"	"	1/2		"	"	"	1/4	
"	"	"	1		"	"	"	1/4		"	"	"	1/4	
"	"	"	3/4		"	"	"	1/2		"	"	"	1/2	
"	"	"	1		"	"	"	1/2		"	"	"	1/2	
"	"	"	3/4		"	"	"	1 1/4		"	"	"	1/4	
"	"	"	3/4		"	"	"	1/2		"	"	"	1/4	
"	"	"	1		"	"	"	1/2		"	"	"	1/2	
"	"	"	1 1/4		"	"	"	1/4		"	"	"	1/4	
"	"	"	1		"	"	"	1/4		"	"	"	1/2	
"	"	"	3/4		"	"	"	1 1/4		"	"	"	1/4	
"	"	"	1		"	"	"	1 1/4		"	"	"	1 1/4	
"	"	"	1 1/4		"	"	"	1 1/4		"	"	"	1 1/4	
Total Rise to 31 st 30.6.4					Total Rise to 31 st 30.2					Total Rise to 31 st 25.11.2				

February 1816

February 1817

February 1818

Days	Rise		Remarks		Rise		Remarks		Rise		Remarks
	th	fr			th	fr			th	fr	
1	Thursday	1/2	Fair, wind S.E.		Saturday	1/4			Sunday	1/4	
2	"	1/2	Do		"	1/2			"	1/4	
3	"	3/4	Cloudy		"	1/4			"	Stationary	
4	"	1/2			"	1/4		rain all day & very hard all the long from N.W.	"	Do	Do
5	"	1/2			"	1/4			"	1/4	
6	"	3/4			"	1/4			"	1/4	
7	"	3/4			"	1/2			"	1/4	
8	"	1/2			"	1/2			"	1/4	
9	"	3/4			"	1/4		hard N. returned	"	Stationary	
10	"	1/2			"	1/2		went away hard rain at night do in morning again	"	1/2	
11	"	1/2			"	3/4		very hard at night from N.W.	"	1/4	
12	"	1/2			"	Stationary			"	2	
13	"	1/2	Do		"	1/4			"	2 1/2	
14	"	1/2	Do		"	Stationary			"	3/4	
15	"	1/2	Do		"	Do	Do		"	1/2	
16	"	1/2	Do		"	1/4			"	1/4	
17	"	1/4	Do		"	1/4			"	1/4	
18	"	1/2	Cloudy		"	1/4			"	1/2	
19	"	1/4	Very Do		"	1/2			"	1/2	
20	"	1/4	Do		"	Stationary			"	3/4	
21	"	1/4	Fair & hot Wind S.W.		"	1/2			"	1	
22	"	1/4	Cloudy rain at night		"	2 1/2		very hard rain	"	1/2	
23	"	1/4	Fair Wind S.W.		"	Stationary	Fair, Wind W.		"	1/2	
24	"	1/4	Do, Do		"	1		Do, Do	"	1/2	
25	"	1/2	Do, Do		"	3/4		Do, Do	"	3/4	
26	"	1/2	Do, Do		"	1/2		Rainy	"	1/2	
27	"	1/4	Do, Do		"	1/4		Do	"	1/2	
28	"	1/4	Do, Do		"	1/2		Do	"	1/4	
29	"	1/2	Do, Do		"	1/2			"	1/2	
30	"	1/4			"	1/2			"	1/2	
31	"	1/4			"	1/2			"	1/2	
Total fall from 18th Aug 1815 to 29th Feb 30 - 2 1/2					Total fall to 20th Feb 31 -				2 1/2	1	1/2

February 1819

[illegible]

February 1820

[illegible]

February 1821

This fall		New arkts.	
Thursday	1/4	Fair & Cool	
Stationary	1/4	Moderately Do	
" "	1/4	Do Do Do	
Stationary	1/4	Very Cold Day	
" "	1/4	F. Morning, & then lops Do	
" "	1/2		
" "	3/4		
" "	1/4		
" "	1/4		
Stationary	1/4		
" "	1/4		
" "	3/4		
" "	1		
" "	3/4		
" "	1/2	Clear & Vastly hot	
" "	1/4	Do Do	
" "	1/4	Do Do	
" "	1/2	Do Do	
" "	3/4	Do Do	
" "	1	Do Do	
" "	1	Very cloudy all the Evening	
" "	1/4	Cloudy & Cool	
" "	1/2	Do Do	
" "	3/4	Warm	
" "	3/4	Do Wind S. E. S. E.	
" "	1/2	Do Do	
" "	1/2	Very North Wester	
" "	3/4	Warm weather	
" "	1	Do Do	
" "	"		
Total Fall to 28 th Dec		27. 2 1/2	

March 1816

March 1817

March 1818

Days	Rise		Remarks		Rise		Remarks		Rise		Remarks
	ft	in			ft	in			ft	in	
1			fine				Fair wind w.				
2			rain at night				rainy all day				
3			Clear & cold				do till noon				
4			Hot				Stationary Fair - wind S.				
5			do wind S. & S.W.				do do				
6			Thermom 75-80				do do				
7			Fair & hot				rainy do				
8			very strong wind from W. & S.				do rain in the night				
9			do do				do rain in morning & clear after				
10			do do				1 fine weather S. & E.				
11			Stationary do do				do do do				
12			moderate wind do				do do do				
13			do & wind hot				do do do				
14			do & do do				do do do				
15			do				do do do				
16			do				do do do				
17			Stationary do				do do do				
18			do do				do do do				
19			do				do do do				
20			do				do do do				
21			Stationary do				do do do				
22			do do				do do do				
23			do				do do do				
24			do				do do do				
25			Stationary do				do do do				
26			do				do do do				
27			Stationary do				do do do				
28			do				do do do				
29			do				do do do				
30			Stationary do				do do do				
31			do do				do do do				

Wind generally from S.W. to W. & S.

371 3

1 light rain at night
Total fall is 3 1/4
March, 30 2 3/4

1 fall to this day 20 - 1/4

April 1815

April 1817

April 1818

Days	Rise		Remarks		Rise		Remarks		Rise		Remarks
	ft	in			ft	in			ft	in	
1	Monday	1/4			Tuesday	1	Cloudy but hot		Wednesday	1/2	
2	Stationary					1/4	Clear & very hot			1	
3	Do	Do				1/2				1/4	
4	Do	Do				1				1	Stormy at night
5	Stationary					1/4				1 1/2	Cloudy & windy
6		1/4				1/2				1 1/2	
7	Stationary					1				1/2	
8		1/4				3/4				3/4	
9	Stationary					1/4				1	even with top of
10		1/2				1/2				1/2	from the bottom
11		1/4				1/4	Do			3/4	
12	Stationary	Do				1/2	Do hail storm			1	
13		1/4				1/2	Do			3/4	
14		1/4				1/2	Do			1	
15	Stationary	Do				1/4	Severe S.W. at night			1/4	
16		1/4				1/4	Stationary Fair wind S.			Stationary	
17	Stationary					1/4	Do wind N.			Do	
18		1/4				1/4	Do			1/4	
19	Stationary					1/4	Stationary Do			1/4	even with top of 1st
20		1/2				1/2	Do			1/4	from bottom
21		1/2				1/2	Stationary Do			Stationary	By N.W. weather
22	Stationary					1/4	Do at night			1/4	exception hot
23	Do	Do				1/4	Do Do afternoon			1/4	Do Do
24	Do	Do				1/2	Cloudy			1/4	Fog in morning & evening
25		1/4				1/4	Stationary Do			3/4	
26		1/4				1/4	Do Do severe hail storm			1	
27	Stationary					1/4	Fair & hot			Stationary	
28	Do	Do				1/4	Do Do			Do	
29	Do	Do				1/4	Do Do			1/4	
30		1/4				1/4	Do Do			1/2	fall to this day 32 ft
31						1/4				3/4	
						1/4	Total fall to 31st April			1 3/4	
						1/4	81 1/4				

See wind from S.W. & S.E.

Therom 85°

Severe S.W. at night

Fair and calm

Do Do wind S.E.

Calm & hot

Do Do

Do Do

Stationary Fair wind S.

Do wind N.

Do

Stationary Do

Do

North West Evening

Do Do very severe

Stationary Do

Do at night

Do Do afternoon

Cloudy

Stationary Do

Do Do severe hail storm

Fair & hot

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

Do Do

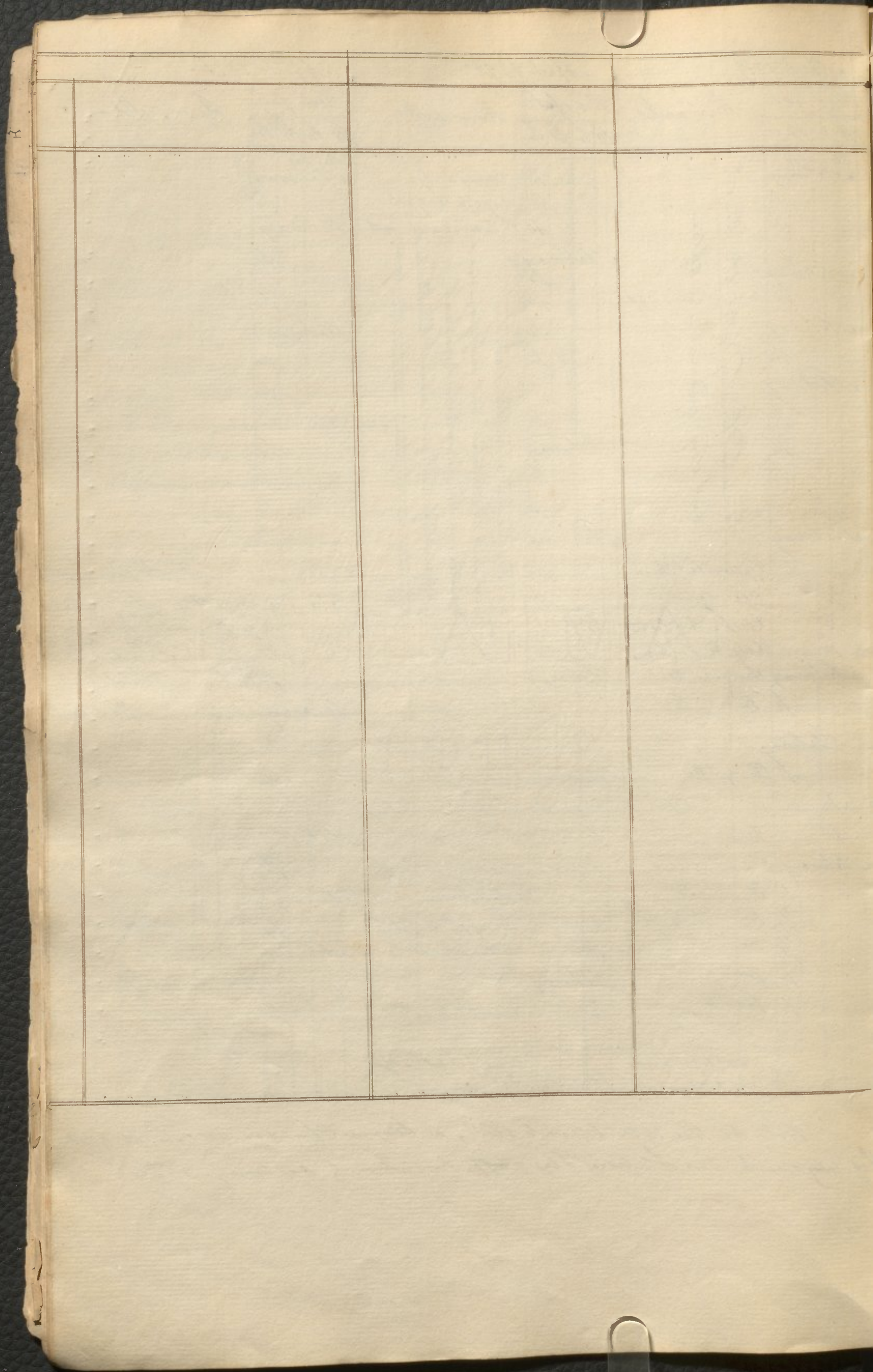
Do Do

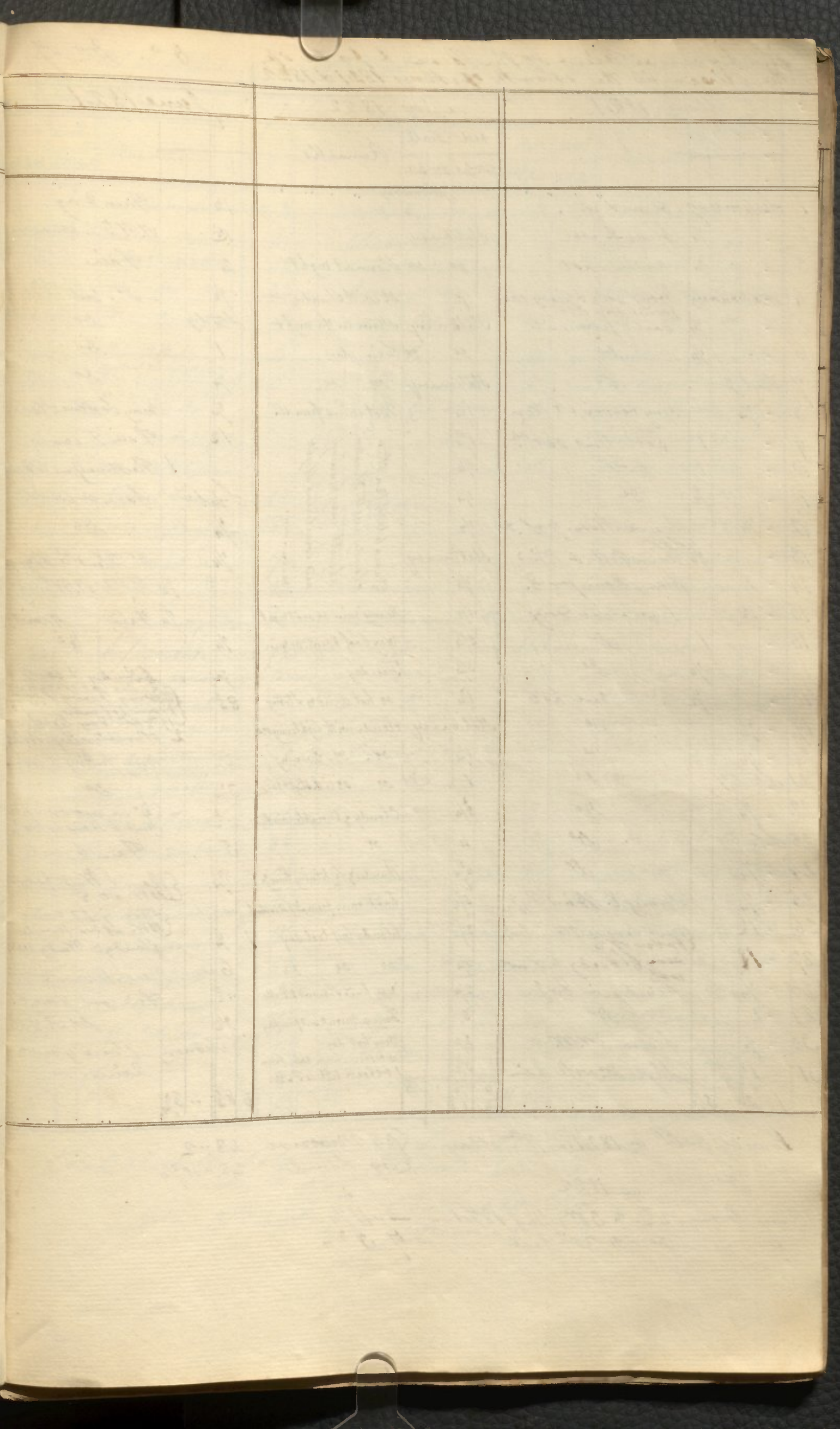
Do Do

Do Do

[illegible]

N.B. On the 14th April 1827, a severe Thunder Storm, at 9 PM. -
 Ldg. Warden struck the Station Flag Staff & cable & destroyed it.





Lowest barometer view of the River & fall of
the River in the month of May 1821 & 1822

Do. Do of

May 1821.			May 1822			June 1821. -		
			rise	fall	Remarks			
			Let bar. Let bar.					
				Wednesday				
1	Stationary	Clear & cool.		$\frac{1}{4}$		$\frac{1}{4}$		Fine day
2	$\frac{1}{4}$	Clear & cool		Stationary		$\frac{1}{2}$		N.W. in afternoon
3	$\frac{1}{4}$	rather hot		do do	Storm at night	2		Fair
4	Stationary	Strong gale & heavy rain		$\frac{1}{2}$	do with Thunder, do	$\frac{1}{2}$		do. but hot
5	$\frac{1}{4}$	cool pleasant		Stationary	Storm in the night	Stationary		do
6	$\frac{1}{4}$	do		do do	Fair day	1		do
7	Stationary	do		Stationary	do do	$\frac{1}{4}$		do
8	$\frac{1}{4}$	Very severe N.W. Wind		$\frac{1}{4}$	Hot Wind from W.	$\frac{3}{4}$		Very severe Storm
9	1	Cool Wind var.		$\frac{1}{4}$		$\frac{1}{2}$		Fair & cool
10	1	Hot		$\frac{1}{4}$				1 Threatening - No Rain
11	$\frac{1}{2}$	do		$\frac{1}{4}$		Stationary		Fair & cool
12	$\frac{3}{4}$	Severe Storm from E. & W.		$\frac{1}{2}$		$\frac{1}{4}$		do
13	$\frac{1}{4}$	Rain P.M. & Wind		Stationary		$\frac{1}{4}$		do Wind E. & damp
14	2	Heavy Rain from E.		$\frac{3}{4}$		$\frac{1}{2}$		Slight N.W. do
15	$\frac{1}{2}$	Fine clear day		$\frac{1}{2}$	Heavy rain do do at night	$\frac{1}{4}$		Fair Moist
16	1	do		$\frac{2}{4}$	Very cool evening. no rain	$\frac{1}{4}$		do
17	$\frac{1}{4}$	do		$\frac{3}{4}$	Fair day	$\frac{1}{2}$		Cloudy & cool
18	$\frac{1}{2}$	do but hot		$\frac{1}{4}$	do hot Wind to Strong	$\frac{3}{4}$		Rain fell up to 10 P.M. heavy rain from 1st morning 9 till 11 Day light
19	$\frac{3}{4}$	do		Stationary	cloudy with lightning do	2		Threatening - No Rain
20	$\frac{1}{4}$	do		$\frac{1}{4}$	do do Evening	$\frac{2}{4}$		Very Sat. & calm
21	Stationary	do		1	do do with slight rain	$\frac{3}{4}$		do
22	$\frac{1}{4}$	do		$\frac{2}{4}$	Cloudy & Variable weather	$\frac{6}{4}$		do in morning, but Wind & Rain in Evg.
23	Stationary	do		1	do	5		Fair & cool
24	$\frac{1}{4}$	do		$\frac{4}{4}$	Thunder & Lightning Evng.	$\frac{5}{4}$		Rain & Wind from E. & W. at 5
25	$\frac{1}{4}$	Strong E. Wind Evg.		$\frac{5}{2}$	Hard rain from N.W. at 10	"		Stormy from N.W. after sunrise
26	$\frac{1}{2}$	Very severe Storm, Evg.		$\frac{2}{2}$	Cloudy but Cool day	$\frac{1}{4}$		Cloudy & Windy var.
27	$\frac{1}{4}$	Very Cloudy but not hot		$\frac{4}{4}$	do do do	6		Clear & pleasant
28	$\frac{3}{4}$	Windy in Evg.		$\frac{2}{4}$	Very hard Showers 2 P.M.	$\frac{4}{2}$		Fair cool day, do
29	2	do		3	Foggy Morn. but fine day	$\frac{3}{2}$		do E. & H.
30	$\frac{1}{2}$	Severe N.W. Wind		$\frac{2}{2}$	Very hot day	Stationary		Cloudy no Rain.
31	$\frac{1}{2}$	Slight do. with Rain		$\frac{3}{2}$	exquisite severe rain from 1 o'clock till 4 P.M.			
	1	2	$\frac{5}{4}$	4	$\frac{1}{4}$	"	$\frac{1}{4}$	
				4	1			

Lowest fall in 1821. - 11th May - { By Measure 28.2
By Level 28.10 $\frac{3}{4}$

do - in 1822
Rise from 12th to 31st May 1821. - " 11 $\frac{1}{4}$.
do - do to 30th June - " 7 $\frac{3}{4}$

So. So. 7 July 1821 & 1822.

July 1821

July 1822

Total Rise 3^d. July — { by Level 24" 2
 { Measure 23" 8½

Do 31st Augt { by level 29th 2¹/₄
Mean 28th 5¹/₂

Do Do 7 Augur 1821 & 1822

Do Do

August 1821				August 1822.				September 1821.			
				rise	Fall		Remarks				
				1st	2nd	3rd					
1	2 3/4	Occasional Showers		4 1/2		Thursday	frequent heavy showers	5		Heavy Rain all N.E.	
2	1/4	Do - hot night		3 1/2			a few Showers	2		Do	
3	1 1/4	Do		3 1/4			some hard rain E. & S.E.	1/4		Do	
4	2 1/4	Do		2			light showers from E to S.	1/4		Do from 10 till 11 A.M.	
5	3 3/4	Showers with H.W.		5 1/4			cloudy & close, light showers	1/4		cloudy, but no rain.	
6	2 1/2	Do. [Newark did]		3 3/4			two or three hard showers	1/2		Fair - W. & S.W.	
7	3/4	cool & fine		2			Fine day but rain in night	Half 3		Do	
8	1/2	Blowzy - no rain		2 1/4			cool day, light airs	1/2		Do	
9	1/4	Do & S.W. & Rainy	Stationary				cloudy, Wind S. S.E.	1/4		hard Showers at N.E.	
10	2 1/4	constant Showers		1 3/4			frequent hard Showers	Half 4		Do	
11	1	Do & sometimes heavy		1/2			Do Do			1/4 Clear but hot.	
12	1 1/4	Do	Stationary				Do Do high Wind S.E.	2 1/2		Do	
13	1 1/2	Do		1			Do Do	3 3/4		Do	
14	1	Moderate & cool	Stationary				Do S.E. less Showers night	6		Showers at N.E.	
15	3/4	Do		1 1/4			Do Do Do	8		Heavy Do. after-noon	
16	Half 3	Do		1			frequent hard rain & Wind	7		Do Do	
17	2	Occasional heavy Showers		1 1/4			Fine day, S. S.E.	8		Do	
18	3 1/4	Do hot		1/2			clear, clear Do Do	7		Showers - S.W.	
19	5 1/2	Do		1			Shower very early, fine day	6 1/2		Clear - hot sun	
20	1 1/4	Do heavy.		1			Fine day, from S. to S.W.	7		Occ. h. Showers	
21	1 1/4	Do		3/4			hard Shower 2 o'clock	6		cloudy no rain.	
22	6	Do		1 1/4			Rain all Night	1/2		Rain Evening	
23	1 1/2	Do		3/4			Windy & light rain	1 1/4		Do	
24	5 3/4	Severe Showers	Stationary				cloudy & high Wind S.W.	3		Occ Showers	
25	1 1/4	Very light Do. S.W.		1			Showers -	5		Very W. with H.	
26	3	cloudy - C. R. at N.E.		3/4			Fair - day	8		from N.E.	
27	3 1/2	heavy S. thro day		3/4			Do	5		very foggy N.E.	
28	6	Do Day & night		1/2			hard Shower Evening	3 1/2		cloudy & cool	
29	2	Do		1 1/4			Fine day	3 1/4		Do Showers	
30	5	Do S. & W. West		1			Do - S. S.E.	3 1/4		very Rain - N.E.	
31	5 1/4	cloudy - Th. & high in E. & S.		1 1/2			Do - S.W.			Fair Day - Sun.	
6 " 1 3				2	11	"	9 1/4				
				2	13 1/4	"	"				

Total Rise this year 6th Sept. - by Level 29" 8
 - Fall to 30th - Sept - by Measure 29" 2
 - Level 2" 4
 - Measure 2" 13

of Sept 1821 & 1822

September 1822.

Rise	Fall	Remarks	
At	End	At	End
Sunday			
1 1/2			very hot S. S. E.
2		do	do
2 1/2			Gale in the morning; rain here
3			Strong Wind E. S. E.
3 1/2		do	- - - do
3 3/4		do	- - - do
4 1/4			Fine day - do but very hot in the night
5			Exception heat in morning & a thunder storm in night
5 1/2			Rain in morning. cool day
5			severe storm, Wind & rain
3 1/2			Stormy weather
3			do till towards evening
2			Fine day - - -
3 1/4		do	- - - do
2		do	- & tolerably cool
1 1/2		- -	calm, but very hot
2 3/4		do	do
2 3/4		do	do
3			fine day afterwards, wind & rain before day break
2			exception heavy rain, evening
2			cool morning, but hot after
1 1/4			Very hot day; wind W.
1		do	- - - do
1 1/2			one or two very light showers
3 1/4			Cool & pleasant S. S. E.
1		do	do do
1			cloudy & cool, with thunder
3			rather cool day
4 1/2		do	- - - do
4 1/2			Very slight showers
1 3 3/4	5 5		
	4 1 1/4		

October 1821

		Rise
		At End
3 1/4	Thunder Storm at N ^o	
4	{ fine clear Day	
2 1/4	Storm at night	
1	Fine - No Rain	
3/4	do. W. S. W.	
1/4	do very hot	
3/4	do	
2	do	
See the above		
From the above		
Date the River was		
raised to full, for good.		

October 1822.

Rise	Fall	Remarks
At	End	
		5 very cloudy all day
		4 1/4 hard rain about noon
		3 1/4 rain in the Evening
		3 cloudy & cool S. E.
		5 1/2 weepine rain in the night
		7 1/2 cool day S. S. E.
		7 3/4 clear, but sun very hot
		7 1/2 do - - do S. S. E. -
		4 do - - do - -
		8 do - wind N. E. by N.
		7 1/4 day tolerably cool
		7 1/2 do - - do - -
		do - - do - -

Rise of the Bourne river in 1821.

Date	May		June		July		August		Remarks
	Ft	In	Ft	In	Ft	In	Ft	In	
1		7	1	5	24	3	20	8	After the 25 th August there is a blank of a week in the observations and from the way in which the Register was kept I cannot tell how much the river fell in this period. During the month of September it fell 13-3 and rose 7 feet leaving a balance of fall of 6-3. In October there are no observations. In November there is scarcely any rise or fall upon the whole. The river must have risen between 5 and 6 feet before the month of May and this would give a rise altogether of about 37 feet which is more a great deal than I have ever observed from the marks on the bank. I have indeed no dependence upon the accuracy of the Table as the observations were conducted in such a way as not to admit of the rectification of any error that may have occurred. The water began to rise before the 20 th of March of the subsequent rise to the 1 st of May 5ft. 3 in. was observed, but there were several days omitted, the error cannot however exceed a few inches in taking it at 6 feet up to the above period. After that the business was carried on by the Mahurim. The Natives say that the River is usually at its greatest height in July, but this was not the case last year, and if the Table is correct it corresponded very nearly in this respect with the Gunps altho' it began to rise so much earlier than is usual in that River.
2	1	8	2	9	24	3	21	2	
3	2	3	4	8	24	3	22	5	
4	2	8	6	9	24	9	23	2	
5	3	8	9	6	25	1	23	10	
6	5		11	11	24	2	24	7	
7	6	7	13	10	23	1	25	6	
8	6	4	14	11	22	7	25	10	
9	5	7	15	4	22	1	26		
10	4	3	15	10	20	7	25	10	
11	3	11	15	6	20	2	25	7	
12	4	16	14	11	20	5	25	3	
13	5	10	14	4	20	10	24	10	
14	7	4	13	10	21	5	24	7	
15	6	11	13	6	21	8	24	3	
16	11	8	13	4	21	8	24	6	
17	15	2	13	8	21	6	25		
18	16	8	14	6	21	2	25	4	
19	17	10	15	5	22	6	25	10	
20	17	9	16	10	22	5	26	2	
21	16	6	18	5	22	2	27	4	
22	15	3	20	2	21	10	28		
23	13	11	22	11	21	5	28		
24	12	6	23		21	1	30	5	
25	11	1	23	8	21	1	31	3	
26	8	10	24	5	21	1			
27	6	9	24	10	20	8			
28	5	3	24	8	19	10			
29	3	11	24	4	19	7			
30	2	9	24	3	20				
31	1	9			20	3			

N.B. The above read from my friend Scott. — The place at which the Register was kept is not mentioned but must have been above Chilmark.

Comparative View of the Rise & Fall of the Bhagruttee & Ganges Daily for the months of June & July 1809.

Month of June 1809

Month of July 1809.

No.	Bhagruttee				Ganges				Remarks
	Rise		Fall		Rise		Fall		
	ft	in	ft	in	ft	in	ft	in	
1						3 1/4			
2						4			
3		1 1/2				4			
4		2 1/4				4			
5		Stationary				5 1/4			
6		3 1/4				8			
7		1				8			
8	1					6			
9	1	7 1/2			1	1 1/2			
10	2	1			1	1 1/2			
11	1	5 1/2							
12	1								
13		8							
14		1 1/4							
15		5 1/2							
16		10							
17		3 1/4							
18		3 1/2							
19		1 1/2							
20		2 1/4							
21		1 1/4							
22		1/2							
23		3 1/4							
24		5 1/4							
25		7 1/2							
26		5 1/2							
27		3 1/2							
28		4 1/4							
29		6							
30		1 1/2							
31									
15 1/2 - 3 1/2 5 8 1/2									

No.	Bhagruttee				Ganges				Remarks
	Rise		Fall		Rise		Fall		
	ft	in	ft	in	ft	in	ft	in	
1						4 1/4			" 3 1/2
2						5 1/2			4 1/2
3						5 3/4			5 1/4
4						7 3/4			7 3/4
5					1	1 1/2			9 1/2
6						11 1/2			1 1/2
7						11 1/4			5
8						9 3/4			2 3/4
9						4 1/4			3 3/4
10						1 1/2			4 1/2
11						3 1/4			2 1/2
12						1 1/4			1 1/4
13					Stationary				Stationary
14						1/2			2
15						1 1/2			2 1/2
16						1 1/2			2
17						1/2			2 1/4
18					Stationary				3
19									1
20						3/4			Stationary
21						1 1/4			2
22						2 3/4			1 1/2
23						1/2			2 1/2
24						4 1/2			3 1/2
25						5			5
26									7 1/2
27					1				9 1/2
28					1	1 1/2			10 1/2
29						11			10 3/4
30						8 1/2			9
11 1/2 9 1/2 1 1/2									

One of the gauges troubled to be taken.

Stationary

Stationary

Stationary

Stationary

11 1/2 9 1/2 1 1/2

Comparative view of the Daily Rain & Fall of Bhadrathie & Gunggeri, for Aug & Sept. 1803

Month of August 1869.						Month of September 1869.					
date	Bhadravati Gauges				Remarks	Bhadravati Gauges				Remarks	
	rise	fall	rise	fall		rise	fall	rise	fall		
	ft	in	ft	in		ft	in	ft	in		
1	4 1/2		4			4 1/2		7 3/4			
2	8		4			4 1/2		7 1/4			
3	3 1/2		3 1/2			2 3/4	1 1/2				
4	1 1/4		2 1/2			3	2 1/2				
5	1 1/4		Stationary			1 1/2	3				
6	1		1			2		1			
7	1 1/2		1 1/4			2 1/4		3			
8		1/2	1 1/2			3		3			
9	2 1/2		3			2 3/4		7 1/2			
10	3 1/4		1			3 1/8		8 1/4			
11	1 1/4		1 1/2			3 1/4		8 1/2			
12	2		Stationary			2 1/4		9 1/4			
13	Stationary		3 1/2			3 1/2		9 1/4			
14	2 1/4		5 1/2			3		8 1/4			
15	2 1/2		3 1/2			2 1/4					
16	1 1/4		3 1/2			4					
17	2 1/4		4			4 3/4					
18	4 1/2		6			5 1/2					
19	4		4			5 1/2					
20	3 1/2		4 1/2			4					
21	4 1/2		1			Stationary					
22	4 1/4		1			6					
23	3 1/2		1 1/2			5 1/4					
24	3 1/4		Stationary			4 1/2					
25	1 1/2		1/2			3 3/4					
26	1 1/2		Stationary		highest Rain	3 1/2					
27	Stationary					3 3/4					
28		1		2 1/4		3 1/4					
29		3 1/4		2 1/2		4 1/2					
30		3 1/4		3 1/4		3 1/2					
31		3 1/4		5 1/2							
5 8 1/2 1 1/4 5 10 1 2											

Comparative View of the Rise of the Bay water & gauges at three Stations in July 1841.

Month of June 1841.

Month of July 1841.

Bolok Begu galy

Baratta Gauges

Month of June 1841.				Month of July 1841.			
Bolok Begu galy				Baratta Gauges			
1	Stationary	1	Stationary	1	1/4	5	Shoals.
2	1	1	1	1/2	1/2	6	do
3	1/4	1	1	Stationary	1/2	6 1/2	do
4	1/4	1	1	2	1/2	6 1/2	Shoal do
5	Stationary	1	1	1/4	1/4	6	do
6	1/4	1 1/2	1 1/2	1/4	1/4	5 1/2	do
7	1/4	Stationary	1 1/2	1/2	1/2	6	Stormy
8	1/2	1 1/4	1 1/4	1/2	1/2	8 1/2	
9	1/4	1 1/4	1 1/4	1/2	1/2	2 3/4	
10	1/4	6 1/4	6 1/4	2 1/2	2 1/2	4	Month of R. open for small boats.
11	1/2	6	6	8	8	4 1/2	
12	3/4	1 3	1 3	6	6	6	
13	1/2	1 5	1 5	1	1	6 1/2	morning w. mouth open
14	1/2	1 8	1 8	1	1	6	do
15	1/2	1 "	1 "	1	1	7 1/4	
16	3/4	9	9	8	8	5 1/2	
17	1/2	7 1/2	7 1/2	1 1/2	1 1/2	4	
18	1/2	1 3/4	1 3/4	10	10	1 1/4	
19	Stationary	8 1/2	8 1/2	10 1/2	10 1/2	4 1/2	Shoals
20	2	10 1/4	10 1/4	1	1	6 3/4	
21	1/2	11	11	1	1	6	
22	1	7 3/4	7 3/4	1	1	5 1/4	
23	1	7	7	1	1	6 3/4	
24	1/2	6 3/4	6 3/4	9	9	8 3/4	Much Rain
25	Stationary	5 3/4	5 3/4	9	9	6 3/4	
26	1/2	6 3/4	6 3/4	10	10	5	
27	1/2	7 1/4	7 1/4	1	1	5 1/4	Shoals
28	1/2	11 1/2	11 1/2	1	1	6 3/4	
29	1/4	1 "	1 "	1 2	1 2	8	
30	1/4	1 1/2	1 1/2	1	1	6 3/4	More Rain
31	1	1 "	1 "	1	1	9 1/2	
6 1/2 8 1/2 8 1/2				11 6 1/2 11 1/2 11 1/2			

N.B. This being it seems to the month of July, & shows the rise at a 3^d Station close above Moorhead about called Bolok begi - but no dependence is to be placed upon its correctness, & probably as little as the other months to be relied upon. - i.e. August & Sept. on the next paper

Comparative View of Daily Rain Fall of Bhopal & Gauges
at 3 Stations in Aug & Sept 1811.

Month of Aug. 1811.

Month of Sept 1811.

	Bhopal			Gauges			Bolatbeg			
1	9	6 3/4	6 3/4	9 1/2	9 1/2	Dreagly	5	1	5	Stone
2	1 1/2	6	6	10 1/2	10 1/2	S	3	1	3 1/2	Highest
3	8	8	8	6 1/2	6 1/2	S	3	1	1 1/4	Shower
4	5	4	4	4 1/2	4 1/2	Stationary	1	2	2	Shower
5	5	4	4	4 3/4	4 3/4	C.	1 1/2	2	2 1/4	Cloudy
6	4	1 3/4	1 3/4	2 3/4	2 3/4		3	3	3	Small shower
7	4	2 3/4	2 3/4	4	4		5 1/2	2 1/2	5 1/2	intermittent
8	3	2	2	3	3		4 1/2	4	6	Shower
9	2 1/2	2	2	2 1/2	2 1/2		5 1/2	4	6 3/4	Shower
10	2 1/2	4	4	1	1		6 1/2	6	7 1/4	Shower
11	1	1	1	2	2		6 1/2	3	7 1/2	Shower
12	1/2	2	2	1	1		6 1/4	4	6	Shower
13	Stationary	2 3/4	2 3/4	Stationary	Stationary		7 1/4	4	9	Wind N.
14	1 1/2	2	2	1 1/2	1 1/2	Occasional	6 1/4	4 1/2	4 1/2	Shower
15	1 1/4	3 1/2	3 1/2	2 1/4	2 1/4	Shower	2	5	3	Shower
16	1 1/4	2	2	1 1/4	1 1/4		7 1/4	5	6	Shower
17	2	2 1/4	2 1/4	1 1/2	1 1/2		1 1/4	4	5	Shower
18	2	1 1/2	1 1/2	3/4	3/4		1 1/4	3 1/4	5 1/2	Shower
19	3 1/4	1	1	1 1/4	1 1/4		2 1/2	1	2	Shower
20	1 1/4	Stationary	Stationary	1 1/4	1 1/4		1 1/4	8	8	Shower
21	2 1/2	2	2	2 1/2	2 1/2		1 1/4	1 1/2	1 1/2	Shower
22	2 1/2	3 1/2	3 1/2	3 1/4	3 1/4		3 1/2	3	3	Shower
23	4	2	2	3 3/4	3 3/4		5	3	3	Shower
24	3 1/2	2	2	4 1/4	4 1/4		2	1 1/2	1 1/2	Shower
25	3	2 3/4	2 3/4	5	5		1 1/2	3	2 1/4	Shower
26	2 1/2	2	2	5 1/4	5 1/4		1	2 3/4	2 3/4	Shower
27	5	3	3	6	6		2	3	2 1/4	Shower
28	4 3/4	3	3	4 1/2	4 1/2		1	2 3/4	2 3/4	Shower
29	4	2	2	5 3/4	5 3/4		2	3	2 1/4	Shower
30	4	2	2	5 3/4	5 3/4		2	3	2 1/4	Shower
31	4 1/2	4	4	5	5		2	3	2 1/4	Shower

Rise & Fall of the Paughrutty
Commencing 1st January
1822.

By Major Pootley

Total - - 32 - 8

2

Fall by Daily Measure to 28.th February - 29 - 10 ¹/₄
Total fall by Daily Measure to the 31.st Jan^y - 28 - 11 ⁵/₄ Ins

January 1822

February 1822

Days	Rise		Fall		Remarks
	Th	Ins	Th	Ins	
Sunday					
1				$\frac{1}{4}$	All the month fine Cold weather; the wind constantly varying from S. & E. to S. W.
2				1	
3				$\frac{1}{2}$	
4				$\frac{3}{4}$	
5				2	
6				$\frac{3}{4}$	
7				$\frac{1}{4}$	
8				$\frac{3}{4}$	
9				$\frac{1}{4}$	
10				$\frac{1}{2}$	
11				$\frac{1}{2}$	
12				$\frac{1}{4}$	
13				1	
14				$\frac{3}{4}$	
15				$\frac{1}{2}$	
16				1	
17				$\frac{3}{4}$	
18				1	
19				$\frac{1}{4}$	
20				$\frac{1}{2}$	
21				$\frac{1}{4}$	
22				$\frac{1}{4}$	
23				$\frac{1}{2}$	
24				$\frac{3}{4}$	
25				$\frac{1}{2}$	
26				1	
27				1	
28				$\frac{3}{4}$	
29				1	
30				$\frac{3}{4}$	
31				$\frac{1}{2}$	
				2 8 $\frac{3}{4}$	

All the month fine Cold weather; the wind constantly varying from S. & E. to S. W.

Days	Rise		Fall		Remarks
	Th	Ins	Th	Ins	
Friday					
1			$\frac{1}{4}$		Rain in the night
2			Stationary		with mist with hail
3			$\frac{3}{4}$		Clear Cold Day -
4			$\frac{1}{2}$		Do Do Do
5			1		Do Do Do
6			$\frac{3}{4}$		Do Do Do
7			$\frac{1}{4}$		Do Do Do
8			$\frac{1}{4}$		Do Do Do
9			$\frac{1}{2}$		Do Do Do
10			$\frac{1}{4}$		Considerable change to warm weather. The sun very hot wind generally from S to S.W.
11			$\frac{1}{4}$		
12			$\frac{1}{4}$		
13			$\frac{1}{4}$		
14			$\frac{1}{4}$		
15			$\frac{1}{4}$		Do Do Do
16			$\frac{1}{4}$		Do Do Do
17			Stationary		Cooler in morning hot Sun
18			$\frac{1}{2}$		Do Do Do
19			$\frac{1}{2}$		Do Do Do
20			$\frac{1}{4}$		Do Do Do
21			Stationary		Very Cold morning. S.W.
22			$\frac{1}{2}$		Do The Sun hot
23			$\frac{1}{2}$		Do Do S.W.
24			$\frac{1}{2}$		Do Do Do
25			$\frac{3}{4}$		Do Do Do
26			1		Do Do Do
27			$\frac{3}{4}$		Do Do Do
28			$\frac{1}{2}$		Do Do Do
			$\frac{1}{4}$	$11\frac{1}{2}$	
				$11\frac{1}{4}$	

Considerable change to warm weather. The Sun very hot. Wind generally from S. to S. W.

General

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Fall by day measurement to 30.th April; 31 - 6
Total fall by day measure to 31.st March - 30 - 9¹/₄

March 1822.

April 1822.

Days	Vise Fall		Remarks		Days
	fl	Ins fl	Ins		
Friday					
1		1/4	Fine day	Morn Cold	1
2		Stationary	Do	Do Do	2
3		1/4	Do	Do Do	3
4		1/2	Do	but hot afternoon	4
5		1/4	Do	Hot wind Commencing	5
6		1/4	Do	Do Do	6
7		1/4	Do	Do Do	7
8		1/4	Hot Sun,	wind Cool, Slight	8
9		Stationary	Do	wind warm -	9
10		1/4	Do	Do & Calm	10
11		Stationary	Do	Do Do	11
12		Do	Do	warm Day -	12
13		Do	Do	Very hot Sun	13
14		Do	Do	Do Do Do	14
15		1/4	Do	Do Do	15
16		3/4	Two or three hard	Showers	16
17		1/2	fine	Cold day	17
18		3/4	Light	Shower, -	18
19		1/2	fine	Day	19
20		1	Do	Do	20
21		1/2	Do	Do	21
22		1	Do	Do	22
23		3/4	Do	Do	23
24		1/4	Severe north	wester	24
25		1/2	Cool	Clear day -	25
26		1/2	Do	Do	26
27		1/4	Foggy	Morning	27
28		1/4	Do	Storm at 7 in evening	28
29		Stationary	Do	from 5 to 1/2 past 6	29
30		Do	Do	Do very hard rain same time	30
31		1/2	Cloudy	No rain	31
<hr/>					
	"	3/4	"	11 3/4	
		"	"	"	

Days	Vise Fall	Remarks	
	fl	Ins fl	
Monday			
1			Fair day -
2		$\frac{3}{4}$	Do Strong wind S. W.
3		$\frac{1}{4}$	Do do do
4		$\frac{1}{4}$	Do do do
5		$\frac{1}{2}$	Do light wind, do
6	Stationary		Cloudy, high wind Evening
7		$\frac{1}{4}$	Very Cool day, -
8	Stationary		Cold thro the night. -
9		1	Do, & till 8 in morning
10		$\frac{3}{4}$	Tolerably Cool
11		$\frac{1}{4}$	Do do
12	Stationary		do do
13		$\frac{1}{4}$	Do do
14	Stationary		Slight wind & rain
15	do	do	Slight N. wester
16		1	do do
17		$\frac{1}{4}$	Cloudy Evening -
18		$\frac{1}{4}$	Cool day
19		$\frac{1}{4}$	Do Still Evening
20	Stationary		Hot Sun
21	do	do	do do
22	do	do	do do
23	do	do	do do
24		$\frac{1}{4}$	do light wind & variable
25		$\frac{1}{4}$	do do
26		$\frac{1}{2}$	do do
27		$\frac{1}{4}$	Thunder & lightning
28	Stationary		fine day -
29	do	do	do - but hot -
30		$\frac{1}{2}$	do do
		$\frac{8}{4}$	

Lowest fall this year by level, 30-8 ^{ft} ^{Ins} when there was 1-7 ^{ft} ^{Ins} water
on the broad Step at bottom, - on 1st May -
Mum^t The River was exactly even with
the tread of the 3^d Step from the bottom;

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The rains may be considered to have set in, on the 7th June

Total Rise to 30th June by day Measure - 7^{ft} - 15 - 9¹/₄ Inches
Total Rise to 31st May by day Measure, - 4 - 1 ^{ft} by level 4 - 8¹/₂

May 1822

June 1822

Days	Wind	Sea	Remarks
Wednesday			
1	$\frac{1}{4}$		
2	Stationary		
3	do do		Storm at night -
4	$\frac{1}{2}$		do with Thunder, do
5	Stationary		Storm in the night
6	do do		Fair day
7	Stationary		do do
8	$\frac{1}{4}$		Hot Wind from W.
9	$\frac{1}{4}$		
10	$\frac{1}{4}$		
11	$\frac{1}{4}$		
12	$\frac{1}{2}$		
13	Stationary		
14	$\frac{3}{4}$		
15	$\frac{1}{2}$		Heavy Rain & at night
16	$\frac{2}{4}$		Very Cool Eveng w. Rain
17	$\frac{3}{4}$		Fair Day
18	$\frac{1}{4}$		do hot wind & strong
19	Stationary		Cloudy with Lightning
20	$\frac{1}{4}$		do do Evening
21	1		do do with slight rain
22	$\frac{2}{4}$		Cloudy & Variable weather
23	4		do
24	$\frac{4}{4}$		Thunder & Lightning, Eveng
25	$\frac{5}{2}$		hard Rain from N. W. at 10 o'clock
26	$\frac{2}{2}$		Cloudy but Cool day
27	$\frac{4}{4}$		do do do
28	$\frac{2}{4}$		Very hard Showers 2 P.M.
29	3		Foggy Mornf. but fine day
30	$\frac{2}{2}$		Very hot day
31	$\frac{3}{2}$		excessive Rain from 1 o'clock till 4 P.M.
4 $\frac{1}{4}$ " $\frac{1}{4}$			
4 1			

Days	Wind	Sea	Remarks
Saturday			
1			$\frac{1}{2}$ very hard rain for an hour 1 o'clock after
2	$\frac{1}{2}$		Fair day, Hot -
3	$\frac{1}{4}$		Rather Cloudy & Close,
4	2		do do do
5	1		do do do
6	$\frac{4}{2}$		Rain at night -
7	$\frac{5}{2}$		constant showers all day & sometimes heavy; wind S. E. C.
8	1		hard rain, & Gale of wind all day from S. E. C.
9	6		do do do S. E. by S.
10	$\frac{4}{4}$		do do but rather less severe
11	1 2		frequent Showers; W.
12	1		no rain, but very sultry,
13	$\frac{2}{2}$		Clear day, but do
14	$\frac{6}{4}$		and hard Showers between 8 & 9 night fine cool day,
15	3		heavy severe Rain midday
16	$\frac{3}{4}$		Fine day but hot
17	$\frac{1}{2}$		do do
18	$\frac{2}{4}$		do do do hard Rain in the Night
19	$\frac{3}{4}$		do do do do
20	1		do severe Storm in the Night
21	$\frac{1}{2}$		do all the morning but cool & fine after,
22			$\frac{1}{4}$ frequent Showers -
23			$\frac{1}{4}$ do sometimes heavy
24	Stationary		showing
25	2		frequent hard Showers
26	$\frac{4}{4}$		very heavy Showers
27	$\frac{9}{4}$		do do all afternoon
28	$\frac{10}{4}$		1 or 2 light Showers
29	$\frac{1}{4}$		fine Cool day
30	$\frac{9}{4}$		do do do
11 $\frac{10}{4}$ - 2			

Done

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on the morning of 6th Aug. The level at Boland's agreed exactly with that at Derhampton with reference to the point of greatest rise of 1821 - but the day measure has in no single instance agreed since the 3^d May; - Mem: The distance between the two places, about 9 miles -

Total Rise by day measure to 31st July 27 - ^{4th In} 6³/₄ by Level 28 - ^{5th In} 5
(difference - 10³/₄ Inches -

July 1822

August 1822-

Days	Rise	Falls	Remarks
Monday			
1	1 3/4		Fair day E. & E. by N.
2	1		light rain Evening - do
3	1		showing all day - do
4	1		frequent heavy showers
5	8 1/4		do do do
6	4 3/4		Constant heavy S. & N. E.
7	3		very severe storm (3 o'clock)
8	1 1/4		Two or 3 Showers - S. & E.
9	1 3/4		light Showers S. E. to E. by N.
10	1 3/4		Fair day - wind S. do
11	1/4		do do do
12	1/2		do - Wind S. E. to S. by E.
13	1		fine day E. to E. S. E.
14	1/2		Close, sultry day.
15	3/4		showing, from E. S. E.
16			Stationary do, from do
17	1 1/4		do high winds, from do
18	1		Cloudy, no rain,
19	1 1/2		light Showers -
20	1 1/4		Gale of wind from S. E.
21	5		Cloudy - do
22	7		do do do
23	5		do & light Showers afternoon
24	6 1/4		very severe rain, afternoon
25	5 1/4		Cloudy, & some rain -
26	5		Very stormy day S. S. W.
27	7 1/4		rainy day with wind, do
28	8 1/2		Cloudy day, little rain
29	6 1/4		Cloudy & close -
30	6		exceptionally heavy rain
31	6 1/2		smart shower before do
11 1 1/4 2 1/4			
11 9			

Days	Rise	Falls	Remarks
Thursday			
1	4 1/2		frequent heavy showers
2	3 1/2		a few Showers
3	3 1/4		some hard rain E. & S. E.
4	2		light Showers from E. to S.
5	5 1/4		Cloudy & close, light Showers
6	3 3/4		Two or three hard Showers
7	2		Fine day but rain in night
8	3/4		Cool day, light air
9			Stationary Cloudy, wind S. S. E.
10	1 3/4		frequent hard Showers
11	1/2		do do do
12			Stationary do do high wind S. E.
13	1		do do
14			Stationary do S. E. hard Showers night
15	1 3/4		do do do
16	1		frequent hard rain & wind,
17	1 1/4		Fine day, S. S. E. -
18	1/2		Clear, Clear do do
19			1 Shower very early, fine day,
20			1 Fine day, from S. to S. W.
21			3/4 hard Shower 2 o'clock
22	1 1/4		Rain all night
23	3/4		Windy & light rain -
24			Stationary Cloudy & high wind E. by S
25	1		showing -
26	3/4		Fair day
27	3/4		do
28	1 1/2		hard Showers Evening
29	1 1/4		Fine day
30	1		do - S. S. E.
31	1 1/2		do S by W.
2 11 9 1/4			
2 1 3/4 -			

The highest rise this year, on the 26th August, (when there was 1 1/4 inches water on the Top Step) - By daily measure 80 ft 2 inches, by accurate level 31 ft 2 1/2 ins: when the River began to fall on the 27th August - & to 35th included, had gone down 6 inches.

& that is, over the landing place

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Total fall to 30th September - 4 - 7/4 ^{inches} by ^{daily} measure & level,

September 1822

October 1822

Days	Wind	Remarks
	Wind	Remarks
1	1/2	Very hot S. S. E.
2	2	do do
3	2 1/2	Gale in the morning & on land 3
4	3	Strong wind E. & S. E. 4
5	3 1/2	do do 5
6	3 3/4	do do 6
7	4 3/4	Fine day - do but very hot in the night.
8	5	Breeze hot in morning & 8 a thunder storm in night
9	5 1/2	Rain in morning - cool day 9
10	5	Severe storm, wind & rain 10
11	3 1/2	Stormy weather 11
12	3	do till towards evening 12
13	2	Fine day - 13
14	3 1/4	do do
15	2	do & tolerably cool
16	1/2	Calm, but very hot
17	2 3/4	do do
18	2 3/4	do do
19	3	fine day afterwards, wind & rain before day break.
20	2	excessive heavy rain, evening
21	2	Cool morning - but hot after
22	1 1/4	Very hot day, wind N.
23	1	do do
24	1/2	one or two very light showers
25	3/4	Cool & pleasant S. S. E.
26	1	do do do
27	1	Cloudy & cool, with thunder
28	3	rather cool day -
29	4 1/2	do do
30	4 1/2	Very slight showers
<div> <div>1 3 3/4 5 5</div> <div>4 1/4</div> </div>		

Wind	Remarks
1	5 be & Cloudy all day
2	4 1/2 be & rain about noon
3	3 1/2 be in the evening
4	3 Cloudy & cool, S. E.
5	5 1/2 excessive rain in the night
6	7 1/2 Cool day, S. E.
7	7 3/4 Clean but sun very hot
8	7 1/2 be - be - S. E.
9	4 be - be - be
10	8 be wind N. E. by N.
11	7 3/4 be tolerably cool
12	7 1/2 be - be - be
13	be - be - be

Compassive River & Lake Point Ball or B. & C. & D. & E. & F. & G. & H. & I. & J. & K. & L. & M. & N. & O. & P. & Q. & R. & S. & T. & U. & V. & W. & X. & Y. & Z.

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Tide Table of January and February 1815.

Kept at Hedderpoor Dockyard near Calcutta by James Hogg Esq.

January 1815.

Phases of the Moon

	D	H	M
☾ Last Quarter, ..	2 ^h	2 ^h	52 ^m
☾ New Moon, ..	10 ^h	1 ^h	57 ^m
☾ First Quarter, ..	18 ^h	1 ^h	2 ^m
☾ Full Moon, ..	24 ^h	21 ^h	47 ^m
☾ Last Quarter, ..	31 ^h	17 ^h	2 ^m

February 1815.

Phases of the Moon

	D	H	M
☾ New Moon, ..	8 ^h	21 ^h	31 ^m
☾ First Quarter, ..	16 ^h	16 ^h	44 ^m
☾ Full Moon, ..	23 ^h	8 ^h	16 ^m

Date	Morning								Evening							
	Low Water				High Water				Low Water				High Water			
	at Ebb				at Flood				at Ebb				at Flood			
	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m
	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m	h ^m
1	2	30	3	4	"	"	"	"	58	27	3	5	12	"	58	1
2	3	15	3	6	6	30	12	"	57	35	3	7	11	"	57	10
3	4	15	3	8	7	45	11	3	56	46	3	9	10	10	56	24
4	5	30	3	9	9	"	10	3	56	3	3	10	10	10	55	44
5	"	"	"	"	10	10	10	3	55	26	3	10	11	1	55	10
6	6	"	3	9	11	45	10	7	54	56	4	6	11	10	54	48
7	8	10	4	6	12	30	10	9	54	33	4	4	12	5	54	23
8	9	10	4	3	1	15	11	1	54	15	4	"	13	"	54	8
9	9	45	4	"	2	30	11	6	54	3	3	10	13	6	53	59
10	10	30	3	10	3	"	12	"	53	57	3	8	13	10	53	55
11	11	"	3	8	3	20	12	3	53	55	3	8	14	"	53	56
12	11	30	3	8	3	45	12	6	53	58	3	8	14	"	54	2
13	12	"	3	8	4	20	12	6	54	7	3	9	14	"	54	14
14	12	30	3	9	5	"	12	6	54	23	3	9	13	11	54	33
15	1	"	3	9	6	"	12	1	54	46	3	10	"	"	55	0 ^m
16	1	45	3	10	6	"	13	2	55	17	3	10	12	3	55	35
17	2	20	3	10	6	30	11	10	55	56	3	10	11	7	56	18
18	3	"	3	10	7	"	11	5	56	43	3	10	11	"	57	8
19	4	"	3	10	7	30	10	10	57	36	3	10	10	7	58	4
20	5	"	3	10	8	45	10	8	58	32	3	10	10	6	59	0
21	"	"	"	"	10	15	10	3	59	28	3	10	11	1	59	54
22	7	"	3	10	11	45	10	7	60	18	3	10	12	2	60	40
23	8	45	3	10	1	"	11	6	60	58	3	8	13	9	61	12
24	9	45	3	8	1	45	12	7	61	22	3	6	15	1	61	26
25	10	45	3	4	2	30	14	"	61	26	3	"	15	11	61	20
26	11	50	2	8	3	"	14	9	61	10	2	2	16	3	60	55
27	12	50	2	"	3	15	15	"	60	36	2	"	16	2	60	13
28	1	"	2	"	4	30	15	"	59	48	2	"	15	10	59	21
29	1	45	2	"	5	30	14	6	58	52	2	2	14	10	58	23
30	2	20	2	3	"	"	"	"	57	54	2	6	13	6	57	25
31	3	"	2	10	6	"	12	10	56	58	3	1	12	8	56	31

Tide Table of March and April 1815.

March 1815

Phases of the Moon

(Last Quarter, . 2 ^h 10 ^m 8 ^s	D.	H.	M.
☉ New Moon, . 10 ^h 15 ^m 21 ^s	10 ^h	15 ^m	21 ^s
☾ First Quarter, . 18 ^h 2 ^m 19 ^s	18 ^h	2 ^m	19 ^s
☾ Full Moon, . 24 ^h 18 ^m 37 ^s	24 ^h	18 ^m	37 ^s

April 1815.

Phases of the Moon.

(Last Quarter, . 1 ^h 5 ^m 7 ^s	D.	H.	M.
☉ New Moon, . 9 ^h 6 ^m 20 ^s	9 ^h	6 ^m	20 ^s
☾ First Quarter, . 16 ^h 9 ^m 21 ^s	16 ^h	9 ^m	21 ^s
☾ Full Moon, . 23 ^h 5 ^m 17 ^s	23 ^h	5 ^m	17 ^s

Date	Morning								Evening							
	Low Water				High Water				Low Water				High Water			
	at				at				at				at			
	at	at	at	at	at	at	at	at	at	at	at	at	at	at	at	at
1	2	8	5	30	12	8	56	13	2	10	12	5	55	54		
2	2	30	2	10	6	15	11	7	55	32	3	11	3	55	12	
3	3	3	2	7	15	10	4	54	55	3	4	9	10	54	40	
4	3	20	3	5	8	15	9	5	54	28	3	6	9	54	18	
5	4	50	3	8	9	30	9	5	54	10	1	10	54	6		
6	6	3	10	11	30	9	5	54	3	3	8	10	9	54	2	
7	8	30	3	6	12	30	11	3	54	3	3	7	11	6	54	6
8	7	10	3	7	1	40	11	3	54	11	3	6	12	7	54	17
9	9	45	3	6	2	30	12	1	54	25	2	10	13	8	54	34
10	10	30	2	10	2	30	13	3	54	44	2	8	14	7	54	54
11	11	2	6	2	45	13	8	55	6	2	6	14	10	55	18	
12	11	30	2	6	3	15	14	1	55	32	2	6	14	10	55	46
13	12	2	6	3	50	14	4	56	0	2	6	14	10	56	14	
14	12	30	2	6	4	14	8	56	29	2	7	14	10	56	45	
15	1	2	8	4	45	14	7	57	1	2	9	14	11	57	18	
16	1	30	2	10	5	30	14	1	57	34	3	12	11	57	51	
17	2	3	2	6	13	1	58	8	3	4	1	13	12	58	25	
18	2	30	3	5	6	12	1	58	41	3	6	11	30	58	58	
19	3	3	8	7	11	1	59	13	3	6	11	1	59	28		
20	4	30	3	7	8	45	10	5	59	41	1	11	1	59	52	
21	6	3	10	11	10	10	60	2	3	10	12	5	60	9		
22	8	15	3	10	12	30	12	1	60	12	3	5	13	7	60	13
23	9	3	1	20	13	3	60	10	2	8	14	10	60	5		
24	10	15	2	8	2	14	6	57	55	2	5	15	9	59	43	
25	11	2	3	2	40	15	10	57	27	2	16	5	59	8		
26	11	40	2	3	16	5	58	47	2	16	5	58	24			
27	12	20	2	3	20	16	5	58	0	3	2	16	5	57	35	
28	12	30	2	3	4	15	10	57	10	2	4	15	1	56	45	
29	1	2	6	4	30	14	8	56	21	2	3	13	6	55	58	
30	1	30	3	5	30	13	4	55	37	3	4	1	55	18		
31	1	45	3	5	50	12	3	55	1	3	8	12	1	54	46	

Tide Table of May and June 1815.

May 1815.

Phases of the Moon.

(Last Quarter, 1" " 17"

● New Moon, . 8^h 18^h 20^h

1 First Quarter, 15, 14, 47

○ Full Moon, .. 22ⁿ 16ⁿ 5ⁿ.

(Last Quarter, .. 30ⁿ 18ⁿ 4ⁿ

June 1815

Phases of the Moon

C. New Moon, ... $\frac{D}{7n}$ $\frac{H}{3n}$ $\frac{M}{53n}$

1) First Quarter. . . 13" 19" 53"

O Full Moon. . . 21. 6. 0.

(Last Quarter, . . . 29th 9th 41st

Morning

Evening

Morning

Evening

[illegible]

Tide Table of July and August 1815.

July 1815.

Phases of the Moon.

1	○ New Moon, . . .	6 ^h	11 ^h	24 ^h
2	☾ First Quarter, . .	13 ^h	2 ^h	12 ^h
3	○ Full Moon, . . .	20 ^h	20 ^h	33 ^h
4	☾ Last Quarter, . .	28 ^h	23 ^h	2 ^h

August 1815.

Phases of the Moon.


○ New Moon, . . .	2 ^h	18 ^h	57 ^h
☾ First Quarter, . .	11 ^h	11 ^h	13 ^h
○ Full Moon, . . .	19 ^h	12 ^h	11 ^h
☾ Last Quarter, . .	27 ^h	10 ^h	22 ^h

Morning															Evening															Morning															Evening																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Side Table of September and October 1815

September 1815.

Phases of the Moon.

 New Moon, $\begin{matrix} D & H & M \\ 3. & 2. & 2\frac{1}{2} \end{matrix}$

1st Quarter . . . 10 " " "

O Full Moon, ... 18, 4, 14

(Last Quarter, . . 25th 19th 57th.

October, 1815. -

Phases of the Moon

	D.	H.	M.
2. Two. Hoop, . . .	2"	10"	55"

1) First Quarter . . . 9" 16" 44"

○ Full Moon, . . . 17. 20. 3.

(Last Quarter . . . 25ⁿ 4ⁿ 8ⁿ

● New Moon, . . . 31. 21. 34

Morning												Evening					Morning												Evening																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Tide Table of November and December 1815.

November 1815.

Phases of the Moon.

1	☾ First Quarter, . . 8 ^h 12 ^m 54 ^s
2	☉ Full Moon, . . 16 ^h 11 ^m 8 ^s
3	☾ Last Quarter, . . 23 ^h 11 ^m 32 ^s
4	☾ New Moon, . . 30 ^h 10 ^m 51 ^s

December 1815.

Phases of the Moon.

☾ First Quarter, . . 8 ^h 9 ^m 50 ^s
☉ Full Moon, . . 16 ^h 0 ^m 58 ^s
☾ Last Quarter, . . 22 ^h 19 ^m 9 ^s
☾ New Moon, . . 30 ^h 2 ^m 51 ^s

Date	Morning								Evening								Morning								Evening							
	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.	Low Water	High Water	4 or 5 P.M.		
	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon	at Ebb	at Flood	at Noon		
	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.	M.S.		
1	10 5 6 2	17 2	58 52	5 3 18 1	58 33		10 30 4 8	2 30 15 7	56 53	4 6 17	11 56 34		11 4 6 3	5 15 4 56 15	4 8 16	4 55 58		11 30 4 8	3 30 14 62	55 40	4 9 15	4 55 24		12 5 4 10	4 10 13 11	55 8 5	14 8	54 54				
2	11 5 2 2	40 17 3	58 12	5 2 18 2	57 50		11 4 6 3	5 15 4 56 15	4 8 16	4 55 58		12 5 4 10	4 10 13 11	55 8 5	14 8	54 54		12 40 5 1	5 13 11	54 41	5 2 13	8 54 51		1 15 5 2	11 13 11	54 22	5 2 12	6 54 16				
3	11 30 5 2	3 10 17	57 27	5 4 18	57 4		11 30 4 8	3 30 14 62	55 40	4 9 15	4 55 24		12 5 4 10	4 10 13 11	55 8 5	14 8	54 54		1 15 5 2	11 13 11	54 22	5 2 12	6 54 16		2 20 5 2	6 45 12	11 54 13	5 2 11	6 54 11			
4	11 55 5 6	3 50 16 8	56 41	5 6 17 5	56 18		12 5 4 10	4 10 13 11	55 8 5	14 8	54 54		1 15 5 2	11 13 11	54 22	5 2 12	6 54 16		2 20 5 2	6 45 12	11 54 13	5 2 11	6 54 11		3 10 5 3	7 30 11 5	54 24	5 3 10	10 54 34			
5	12 20 5 8	4 30 15 7	55 56	5 10 16 9	55 36		12 40 5 1	5 13 11	54 41	5 2 13	8 54 51		1 15 5 2	11 13 11	54 22	5 2 12	6 54 16		3 10 5 3	7 30 11 5	54 24	5 3 10	10 54 34		4 10 5 3	9 11 3	54 46	5 3 10	10 55 0			
6	12 45 6 2	5 15 14 5	55 18	6 3 14 9	55 1		1 15 5 2	11 13 11	54 22	5 2 12	6 54 16		2 20 5 2	6 45 12	11 54 13	5 2 11	6 54 11		4 10 5 3	9 11 3	54 46	5 3 10	10 54 34		5 15 5 1	11 10 11	55 55	5 1 12	8 56 17			
7	1 5 6 7	10 13 6	54 25	6 8 12 10	54 18		2 20 5 2	6 45 12	11 54 13	5 2 11	6 54 11		3 10 5 3	9 11 3	54 46	5 3 10	10 54 34		6 10 5 3	9 11 3	54 46	5 3 10	10 54 34		6 10 5 3	9 11 3	54 46	5 3 10	10 54 34			
8	1 40 6 7	5 13 6	54 25	6 8 12 10	54 18		3 10 5 3	9 11 3	54 46	5 3 10	10 54 34		4 10 5 3	9 11 3	54 46	5 3 10	10 54 34		7 10 5 3	9 11 3	54 46	5 3 10	10 54 34		7 10 5 3	9 11 3	54 46	5 3 10	10 54 34			
9	2 10 6 9	6 30 12 6	54 14	6 8 12 4	54 12		4 10 5 3	9 11 3	54 46	5 3 10	10 54 34		5 15 5 1	11 10 11	55 55	5 1 12	8 56 17		5 15 5 1	11 10 11	55 55	5 1 12	8 56 17		8 15 5 1	12 30 14	11 57 25	4 10 14	10 57 47			
10	3 30 6 8	7 45 12	54 13	6 9 11 10	54 16		6 10 5 3	9 11 3	54 46	5 3 10	10 54 34		7 10 5 3	9 11 3	54 46	5 3 10	10 54 34		6 10 5 3	9 11 3	54 46	5 3 10	10 54 34		9 5 4 8	1 10 14	11 58 10	4 6 15	5 58 31			
11	4 10 6 10	8 12	54 22	6 3 12 3	54 30		7 10 5 3	9 11 3	54 46	5 3 10	10 54 34		8 15 5 1	12 30 14	11 57 25	4 10 14	10 57 47		7 10 5 3	9 11 3	54 46	5 3 10	10 54 34		10 5 4 5	2 10 14	11 58 49	4 3 15	9 59 6			
12	6 10 6 3	11 30 12 8	54 40	6 2 13 4	54 52		8 15 5 1	12 30 14	11 57 25	4 10 14	10 57 47		9 5 4 8	1 10 14	11 58 10	4 6 15	5 58 31		8 15 5 1	12 30 14	11 57 25	4 10 14	10 57 47		11 10 4 1	3 11 14	59 20	4 3 16	4 59 31			
13	7 30 6 2	12 30 13 4	55 6	6 14	55 21		9 5 4 8	1 10 14	11 58 10	4 6 15	5 58 31		10 5 4 5	2 10 14	11 58 49	4 3 15	9 59 6		9 5 4 8	1 10 14	11 58 10	4 6 15	5 58 31		11 30 4 1	3 45 14	59 40	4 2 16	11 59 45			
14	9 10 5 11	1 14 2	55 37	5 9 15 2	55 54		10 5 4 5	2 10 14	11 58 49	4 3 15	9 59 6		11 10 4 1	3 11 14	59 20	4 3 16	4 59 31		10 5 4 5	2 10 14	11 58 49	4 3 15	9 59 6		12 20 4 2	4 15 14	11 59 48	4 2 15	3 59 48			
15	9 20 5 0	1 30 14 9	56 12	5 4 16 1	56 30		11 10 4 1	3 11 14	59 20	4 3 16	4 59 31		12 20 4 2	4 15 14	11 59 48	4 2 15	3 59 48		11 10 4 1	3 11 14	59 20	4 3 16	4 59 31		1 10 4 2	5 10 13	59 49	4 3 14	3 59 41			
16	10 10 5 3	2 15 4	56 48	5 1 16 9	57 6		12 20 4 2	4 15 14	11 59 48	4 2 15	3 59 48		1 10 4 2	5 10 13	59 49	4 3 14	3 59 41		12 20 4 2	4 15 14	11 59 48	4 2 15	3 59 48		2 45 4 7	6 13 6	59 17	4 8 12	3 59 7			
17	10 30 5	2 25 15 8	57 23	5 17 2	57 39		1 10 4 2	5 10 13	59 49	4 3 14	3 59 41		2 45 4 7	6 13 6	59 17	4 8 12	3 59 7		1 10 4 2	5 10 13	59 49	4 3 14	3 59 41		3 45 4 8	7 12 8	58 55	4 8 12	11 58 42			
18	11 10 5	3 15 10	57 54	5 17 2	58 8		2 45 4 7	6 13 6	59 17	4 8 12	3 59 7		3 45 4 8	7 12 8	58 55	4 8 12	11 58 42		2 45 4 7	6 13 6	59 17	4 8 12	3 59 7		4 45 4 8	8 45 12	11 58 30	4 8 11	4 58 16			
19	11 30 5	3 45 15 7	58 20	5 16 8	58 31		3 45 4 8	7 12 8	58 55	4 8 12	11 58 42		4 45 4 8	8 45 12	11 58 30	4 8 11	4 58 16		3 45 4 8	7 12 8	58 55	4 8 12	11 58 42		6 10 4 7	9 30 11	58 3	11 3	57 49			
20	12 10 5	4 15 15	58 41	5 2 16	58 49		4 45 4 8	8 45 12	11 58 30	4 8 11	4 58 16		5 30 5 8	8 45 12	11 58 30	4 8 11	4 58 16		4 45 4 8	8 45 12	11 58 30	4 8 11	4 58 16		6 10 4 7	9 30 11	58 3	11 3	57 49			
21	12 45 5 3	5 30 14 1	58 56	5 3 14	11 59 3		5 30 5 8	8 45 12	11 58 30	4 8 11	4 58 16		6 10 4 7	9 30 11	58 3	11 3	57 49		5 30 5 8	8 45 12	11 58 30	4 8 11	4 58 16		7 15 5 5	11 45 13	58 46	5 5 14	3 58 36			
22	2 10 5 3	1 1	59 6	5 3 13	5 59 9		6 10 4 7	9 30 11	58 3	11 3	57 49		7 15 5 5	11 45 13	58 46	5 5 14	3 58 36		6 10 4 7	9 30 11	58 3	11 3	57 49		8 15 5 5	1 20 13	10 58 26	5 15 3	58 13			
23	2 30 5 3	5 30 13 10	59 11	5 6 12	10 59 11		7 15 5 5	11 45 13	58 46	5 5 14	3 58 36		8 15 5 5	1 20 13	10 58 26	5 15 3	58 13		7 15 5 5	11 45 13	58 46	5 5 14	3 58 36		9 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
24	3 30 5 8	7 13	59 11	5 10 12	59 11		8 15 5 5	1 20 13	10 58 26	5 15 3	58 13		9 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		8 15 5 5	1 20 13	10 58 26	5 15 3	58 13		10 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
25	5 30 5 8	8 45 12	59 8	12 4	59 4		9 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		10 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		9 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		11 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
26	6 10 5 6	10 30 12	59 0	5 5 13	3 58 54		10 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		11 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		10 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		12 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
27	7 15 5 5	11 45 13	58 46	5 5 14	3 58 36		11 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		12 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		11 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		1 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
28	8 15 5 5	1 20 13	10 58 26	5 15 3	58 13		12 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		1 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		12 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		2 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
29	9 10 5 1	1 14 8	58 0	4 11 16	3 57 45		1 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		2 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		1 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		3 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			
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31	11 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		3 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		4 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		3 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11		5 10 4 10	1 30 15	3 57 28	4 8 16	10 57 11			

Side Table of January and February 1816.

January 1816.

Phases of the Moon.

- ☾ First Quarter, . . 8^h 11^m 45^s Morning
- ☾ Full Moon, . . 16^h 7^m 12^s Morning
- ☾ Last Quarter, . . 24^h 10^m 7^s Evening
- ☾ New Moon, . . 29^h 2^m 44^s Afternoon
- ☉ Sun enters ♊ Aquarius 21^h 7^m 5^s Morning

February 1816.

Phases of the Moon.

- ☾ First Quarter, . . 7^h 7^m 23^s Evening
- ☾ Full Moon, . . 13^h 6^m 3^s Evening
- ☾ Last Quarter, . . 20^h 9^m 36^s Morning
- ☾ New Moon, . . 28^h 9^m 25^s Morning
- ☉ Sun enters ♋ Pisces, 19^h 11^m 48^s Evening

Day	Morning								Evening							
	Low Water				High Water				Low Water				High Water			
	at				at				at				at			
	Hour	Min	Sec	Dist	Hour	Min	Sec	Dist	Hour	Min	Sec	Dist	Hour	Min	Sec	Dist
	H.	M.	S.		H.	M.	S.		H.	M.	S.		H.	M.	S.	
1	11	40	4	"	3	30	12	10	54	46	4	1	14	7	54	35
2	12	15	4	2	4	"	12	11	54	26	4	3	14	8	54	18
3	12	30	4	3	4	45	12	6	54	12	4	3	13	8	54	7
4	1	45	4	3	6	"	12	"	54	5	4	4	12	7	54	5
5	2	"	4	4	"	"	"	"	54	7	4	4	11	10	54	12
6	2	15	4	4	6	"	12	"	54	19	4	4	11	"	54	29
7	3	"	4	3	8	45	11	2	54	41	4	3	11	"	54	56
8	3	30	4	3	7	15	10	10	55	13	4	4	10	7	55	33
9	4	30	4	3	8	15	10	4	55	55	4	2	10	5	56	19
10	6	"	4	"	10	"	10	2	56	44	"	"	10	6	57	11
11	6	"	4	"	11	15	10	4	57	38	4	"	11	"	58	6
12	6	45	4	"	12	"	11	"	58	33	3	11	12	6	58	59
13	7	45	3	11	1	20	11	8	59	23	3	10	13	8	59	45
14	9	45	3	10	2	"	12	3	60	4	3	8	14	8	60	20
15	10	45	3	6	2	45	13	3	60	32	3	4	15	4	60	40
16	11	30	3	2	3	45	13	11	60	43	3	"	15	8	60	43
17	12	30	2	11	4	30	14	3	60	39	2	10	15	8	60	31
18	1	15	2	10	5	5	14	"	60	19	3	1	14	10	60	5
19	2	"	3	3	6	"	13	3	59	48	3	4	"	"	59	30
20	2	45	3	4	6	"	13	6	59	11	3	4	12	5	58	50
21	3	30	3	4	6	45	12	5	58	29	3	6	11	6	58	8
22	4	"	3	7	7	45	11	"	57	47	3	7	11	"	57	27
23	5	"	3	8	9	"	10	7	57	7	3	9	10	9	56	48
24	6	"	4	"	10	15	10	1	56	30	"	"	10	10	56	12
25	6	"	4	"	12	"	10	2	55	56	4	2	11	5	55	41
26	8	30	4	2	1	"	10	4	55	27	3	11	11	10	55	13
27	9	30	3	10	2	"	10	9	55	1	3	4	12	10	54	50
28	9	45	3	6	2	15	11	3	54	39	3	2	13	5	54	29
29	11	"	3	"	3	"	11	10	54	21	3	2	13	10	54	14
30	11	30	3	2	3	30	12	3	54	8	3	3	14	"	54	3
31	12	"	3	3	4	5	12	6	53	59	3	3	14	"	53	57

Tide Table of March and April 1816.

March 1816.

Phases of the Moon,

1	☾ First Quarter, .. 7 ^h 10 ^m 49 ^m Morning
2	☉ Full Moon, .. 14 ^h 3 ^m 41 ^m Morning
3	☾ Last Quarter, .. 20 ^h 11 ^m 35 ^m Evening
4	☾ New Moon, .. 29 ^h 3 ^m 21 ^m Morning
5	☉ Sun enters ♊ Aries, 20 ^h 11 ^m 3 ^m Evening

April 1816.

Phases of the Moon,

1	☾ First Quarter, .. 5 ^h 10 ^m 16 ^m Evening
2	☉ Full Moon, .. 12 ^h " 37 ^m Morning
3	☾ Last Quarter, .. 19 ^h 3 ^m 32 ^m Afternoon
4	☾ New Moon, .. 27 ^h 7 ^m 25 ^m Evening
5	☉ Sun enters ♈ Taurus, .. 20 ^h 11 ^m 3 ^m Morning

Date	Morning								Evening							
	Low Water				High Water				Low Water				High Water			
	at ebbed				at flowed				at ebbed				at flowed			
	at	ebbed	to	at	flowed	to	at	Midnight	at	ebbed	to	at	flowed	to	at	Midnight
	H.	M.	P.	H.	M.	P.	M.S.	Foot	H.	M.	P.	M.S.	Foot	H.	M.	P.
1	12	"	3	"	4	"	14 6	54 2	3	1	14 6	54 8		12	20	2 10
2	12	30	3	2	4	30	14 3	54 16	3	3	14 "	54 25		1	"	3 "
3	1	"	3	3	5	"	13 4	54 26	3	3	13 5	54 49		1	5	3 4
4	1	40	3	3	5	15	13 3	55 4	3	3	12 11	55 21		1	30	3 10
5	1	30	3	4	5	45	12 2	55 40	3	4	"	"	56 1	2	"	4 "
6	2	10	3	4	5	45	11 6	56 24	3	6	11 2	56 48		2	45	4 4
7	2	45	3	6	6	30	10 7	57 14	3	6	10 8	57 41		4	30	3 10
8	3	45	3	6	8	"	10 1	58 7	3	6	10 5	58 27		6	30	3 10
9	6	"	3	8	9	45	9 5	59 5	"	"	10 6	59 5		8	"	3 8
10	6	"	3	8	11	30	10 2	59 57	3	8	11 2	60 21		9	10	3 "
11	7	45	3	7	12	45	11 6	60 42	3	5	14 3	60 59		10	"	2 10
12	9	30	3	3	1	5	13 11	61 12	3	"	16 4	61 21		10	30	2 4
13	10	5	2	6	2	"	15 6	61 25	2	6	16 1	61 24	Small Bone	10	45	2 "
14	11	"	2	6	2	45	16 10	61 17	2	5	17 7	61 5	Heavy "	11	"	2 "
15	11	45	2	4	3	30	17 2	60 50	2	"	17 7	60 31	"	12	15	2 8
16	12	30	1	10	4	"	16 7	60 8	1	9	16 6	59 42	Very Heavy	12	45	2 10
17	1	10	1	8	4	45	15 7	59 15	1	10	15 4	58 46	Small Bone	1	"	3 6
18	1	45	1	10	5	15	14 7	58 17	2	1	14 1	57 48		1	30	3 10
19	2	"	2	3	6	"	13 "	57 19	2	8	"	"	56 51	2	"	4 1
20	2	10	2	10	6	"	12 2	56 25	3	2	11 7	56 1		2	30	4 8
21	2	45	3	5	6	45	10 8	55 39	3	8	10 3	55 19		4	15	5 "
22	3	30	4	"	8	"	9 8	55 1	4	6	10 2	54 45		6	30	4 "
23	6	"	4	6	10	45	9 7	54 32	"	"	10 7	54 21		8	15	3 10
24	7	30	4	3	12	30	10 6	54 12	3	10	11 10	54 5		8	50	3 8
25	8	45	3	8	1	45	11 2	54 0	3	6	12 8	53 57		9	20	3 8
26	9	30	3	6	2	10	12 1	53 55	3	10	13 10	53 55		9	45	3 8
27	10	"	3	6	2	15	13 3	53 56	3	2	14 6	53 59		10	30	3 2
28	10	30	2	11	2	30	14 3	54 3	2	6	14 10	54 8		11	"	2 10
29	11	"	2	6	3	"	14 10	54 15	2	6	15 4	54 23		11	15	2 8
30	11	30	2	6	3	"	15 1	54 32	2	7	15 4	54 42	Small Bone	11	50	3 "
31	11	50	2	7	4	"	15 3	54 53	2	10	15 4	55 6	"	"	"	"

Side Table of May and June 1816.

May 1816.

Phases of the Moon.

	D.	H.	M.
☾ First Quarter, ..	3 ^h	5 ^m	2 ^m Morning.
☾ Full Moon, ..	11 ^h	9 ^m	34 ^m Evening.
☾ Last Quarter, ..	19 ^h	8 ^m	20 ^m Morning.
☾ New Moon, . . .	27 ^h	9 ^m	1 ^m Morning.
☉ Sun enters ♊ Gemini .	21 ^h	"	2 ^m Afternoon.

June 1816..

Phases of the moon.

	^D	^H	^M
) First Quarter, ..	3 _u	1 _u	12. Morning,
○ Full Moon, ..	10 _u	7 _u	13. Morning,
(Last Quarter, ..	18 _u	1 _u	42. Morning,
○ New Moon, ..	25 _u	8 _u	1 _u Afternoon,
⊙ Sun enters ♉ Cancer, ..	21 _u	8 _u	29 _u Evening,

Date	Morning							Evening							Bones	Morning							Evening							Bones					
	Low Water			High Water			Hor. Parrel	Low Water			High Water			Hor. Parrel		Low Water			High Water			Hor. Parrel	Low Water			High Water			Hor. Parrel						
	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to	at	Ebb'd to		Flood to	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to	at	Ebb'd to	Flood to							
	10	11	12	1	2	3	4	5	6	7	8	9	10	11		12	1	2	3	4	5	6	7	8	9	10	11	12	1		2	3			
	12	26	3	2	3	50	15	10	56	55	3	4	14	6	57	11		10	11	26	3	2	3	50	15	10	56	55	3	4	14	6	57	11	
1	12	30	3	4	4	45	15	3	57	28	3	5	13	5	57	44		10	11	30	3	4	4	45	15	3	57	28	3	5	13	5	57	44	
2	12	50	3	8	6	"	14	10	58	1	3	10	"	"	58	18		10	11	50	3	8	6	"	14	10	58	1	3	10	"	"	58	18	
3	2	"	3	10	6	"	13	2	58	35	3	10	12	10	58	51		10	11	"	3	10	6	"	13	2	58	35	3	10	12	10	58	51	
4	3	"	4	3	7	15	11	8	59	6	4	6	11	8	59	21		10	11	"	4	3	7	15	11	8	59	6	4	6	11	8	59	21	
5	5	"	4	8	8	49	11	4	59	35	"	"	11	8	59	47		10	11	"	4	8	8	49	11	4	59	35	"	"	11	8	59	47	
6	6	"	4	10	11	"	11	4	59	57	4	3	12	8	60	5		10	11	"	4	10	11	"	11	4	59	57	4	3	12	8	60	5	
7	7	30	4	"	12	"	13	"	50	10	3	2	14	2	60	11		10	11	30	4	"	12	"	13	"	50	10	3	2	14	2	60	11	
8	8	40	3	2	12	40	14	8	60	11	3	"	15	"	60	7		10	11	40	3	2	12	40	14	8	60	11	3	"	15	"	60	7	
9	9	20	2	11	1	10	16	3	50	0	2	11	16	4	59	49	Small Bone	10	11	20	2	11	1	10	16	3	50	0	2	11	16	4	59	49	
10	10	15	2	11	1	49	17	3	59	35	3	"	16	10	59	18	Medium	10	11	15	2	11	1	49	17	3	59	35	3	"	16	10	59	18	
11	10	45	3	"	2	30	17	6	58	58	3	"	16	10	58	36	Heavy Bone	11	10	45	3	"	2	30	17	6	58	58	3	"	16	10	58	36	
12	11	15	3	"	3	"	17	3	58	13	3	1	15	8	57	47	"	12	11	15	3	"	3	"	17	3	58	13	3	1	15	8	57	47	
13	12	"	3	2	3	55	16	5	57	24	3	6	15	10	56	59	Small	12	11	"	3	2	3	55	16	5	57	24	3	6	15	10	56	59	
14	12	"	3	6	4	"	15	1	56	35	3	6	14	"	56	11		12	11	"	3	6	4	"	15	1	56	35	3	6	14	"	56	11	
15	12	40	3	8	4	55	14	7	55	49	3	10	"	"	55	29		12	11	40	3	8	4	55	14	7	55	49	3	10	"	"	55	29	
16	1	"	4	3	5	"	13	"	55	11	4	6	13	5	54	55		12	11	"	4	3	5	"	13	"	55	11	4	6	13	5	54	55	
17	1	30	4	10	6	"	11	10	54	41	4	6	11	10	54	30		12	11	30	4	10	6	"	11	10	54	41	4	6	11	10	54	30	
18	2	"	5	10	7	"	11	7	54	21	6	"	12	3	54	15		12	11	"	5	10	7	"	11	7	54	21	6	"	12	3	54	15	
19	4	"	6	3	9	"	11	3	54	11	6	3	12	1	54	9		12	11	4	6	3	9	"	11	3	54	11	6	3	12	1	54	9	
20	5	30	6	"	10	15	12	6	54	11	"	"	13	6	54	14		12	11	5	30	6	"	10	15	12	6	54	11	"	"	13	6	54	14
21	6	30	4	"	11	45	13	"	54	20	5	8	13	10	54	28		12	11	6	30	4	"	11	45	13	"	54	20	5	8	13	10	54	28
22	7	30	5	8	12	25	13	4	54	38	5	2	14	"	54	49		12	11	7	30	5	8	12	25	13	4	54	38	5	2	14	"	54	49
23	8	15	4	10	12	45	15	"	55	2	4	4	14	7	55	16		12	11	8	15	4	10	12	45	15	"	55	2	4	4	14	7	55	16
24	8	50	4	4	1	10	15	9	55	31	3	10	15	4	55	47		12	11	8	50	4	4	1	10	15	9	55	31	3	10	15	4	55	47
25	9	30	3	8	1	20	16	4	56	3	3	8	15	8	56	20		12	11	9	30	3	8	1	20	16	4	56	3	3	8	15	8	56	20
26	10	"	3	8	1	45	16	9	56	37	3	8	15	11	56	53		12	11	10	"	3	8	1	45	16	9	56	37	3	8	15	11	56	53
27	10	45	3	8	2	45	17	2	57	9	3	8	16	3	57	25		12	11	10	45	3	8	2	45	17	2	57	9	3	8	16	3	57	25
28	11	15	3	8	3	"	17	"	57	40	3	10	15	6	57	54		12	11	11	15	3	8	3	"	17	"	57	40	3	10	15	6	57	54
29	11	55	4	"	3	40	16	9	58	7	4	2	15	"	58	19		12	11	11	55	4	"	3	40	16	9	58	7	4	2	15	"	58	19
30	12	20	4	4	4	30	15	6	58	31	4	6	14	"	58	41		12	11	12	20	4	4	4	30	15	6	58	31	4	6	14	"	58	41
31																																			

Side Table of September and October 1815.

September 1816.

Phases of the Moon

O Full Moon, .. ^D 6. ^{H.} 10. ^{M.} 10. Evening,

(Last Quarter, .. 15th 1st 41st Morning,

C. New Moon, .24, 8. 57^h Evening

First Quarter, .. 28th 2nd 19th Afternoon,

○ Sun enters Libra, . 23rd 16th 37th Morning,

October 1816.

Phases of the Moon

O Full Moon, ... ^D 6ⁿ ^H 3ⁿ ^M 13ⁿ. Afternoon

(Last Quarter, . . . 14ⁿ 2ⁿ 29ⁿ • Afternoon,

☉, low & Noon, . . . 2h. 5u 5th Morning,

First Quarter .. 28ⁿ 4ⁿ 32ⁿ Morning,

☉ Sun enters in Scorpio, 23rd 6th 13th Evening

Date	Morning							Evening							Morning							Evening											
	Low Water			High Water			Hor.	Low Water			High Water			Hor.	Bore	Low Water			High Water			Hor.	Low Water			High Water			Hor.	Bore			
	at	bbbed to		at	Flowed to	10am	bbbed to	Flowed to	Midnight	at	bbbed to		at	Flowed to		10am	bbbed to	Flowed to	Midnight	at	bbbed to		at	Flowed to	10am	bbbed to	Flowed to	Midnight					
	H.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	H.	M.	S.		M.	S.	H.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	M.		S.		
1	5	30	9	6	8	45	15	6	56	8	"	"	15	6	55	51		6	"	9	10	11	"	15	"	54	49	10	"	15	4	54	37
2	5	45	9	6	10	45	16	3	55	34	9	3	16	3	55	19		8	"	10	"	11	45	17	7	54	26	10	"	17	8	54	17
3	8	"	8	10	12	"	17	8	55	5	8	6	17	"	54	53		9	"	10	"	12	30	19	2	54	10	10	"	19	4	54	4
4	9	"	8	4	1	"	18	6	54	42	8	4	18	"	54	22		9	45	10	"	1	"	19	10	53	59	7	10	17	10	53	56
5	10	"	8	3	1	40	19	1	54	23	8	"	19	"	54	15		10	15	9	8	1	15	20	4	53	55	9	8	22	4	53	55
6	10	20	7	10	1	45	19	5	54	9	7	8	19	"	54	4		10	20	9	4	1	20	22	4	53	56	9	2	20	4	53	59
7	11	"	7	8	2	45	19	8	54	0	7	8	19	"	53	57	Light	11	"	9	"	2	"	19	10	54	3	9	"	20	"	54	8
8	11	30	7	8	3	"	19	8	53	56	7	8	19	"	53	56	"	11	30	8	7	2	40	19	7	54	14	8	9	19	7	54	22
9	11	50	7	8	3	30	19	6	53	58	7	8	19	"	54	2		12	"	8	9	3	"	19	3	54	21	8	4	19	6	54	42
10	12	15	7	9	3	45	18	11	54	7	7	9	18	7	54	14		12	25	8	2	3	45	18	7	54	24	8	"	18	10	55	8
11	12	20	7	9	4	"	18	4	54	23	7	9	18	"	54	24		12	45	7	11	4	30	17	10	55	24	7	8	18	"	55	42
12	12	45	7	9	4	45	17	6	54	47	7	10	17	8	55	3		1	7	7	8	5	15	16	8	56	2	7	8	17	"	56	22
13	1	"	7	10	5	"	16	10	54	21	7	10	17	"	55	41		1	30	8	10	5	20	15	4	56	44	8	"	"	"	57	8
14	1	30	8	"	5	30	15	11	56	3	8	2	"	"	56	27		2	"	8	2	5	30	15	7	57	33	8	2	13	4	57	34
15	2	"	8	4	5	30	15	11	56	53	8	6	4	3	57	20		2	55	8	4	7	"	14	1	58	26	8	6	13	5	58	52
16	3	15	9	"	6	30	4	6	57	48	9	4	10	8	58	17		6	"	8	"	9	"	13	11	57	18	"	"	14	"	59	43
17	6	"	8	"	8	45	14	"	58	46	"	"	14	3	59	14		6	"	7	10	10	40	15	5	60	6	7	"	15	8	60	26
18	6	15	8	"	11	"	15	6	59	41	7	5	15	2	60	6		7	45	6	8	11	50	16	8	60	44	7	"	17	4	60	59
19	8	"	7	"	12	20	17	1	60	29	7	"	17	"	60	48		9	"	6	6	12	30	16	11	61	9	6	4	18	8	61	15
20	9	10	6	10	1	"	18	4	61	3	6	8	18	4	61	14		9	45	6	"	1	"	18	7	61	16	5	10	19	1	61	12
21	10	"	6	4	1	45	19	3	61	20	6	8	19	6	61	21		10	40	5	7	1	30	18	9	61	3	5	4	19	5	60	50
22	10	45	6	4	2	15	19	10	61	18	6	4	19	10	61	9	Small Bore	10	50	5	3	2	"	18	9	60	33	5	3	19	6	60	12
23	11	30	6	4	2	30	20	3	60	56	6	6	20	3	60	39	Meddle Bore	11	30	5	2	2	40	18	5	59	47	5	6	18	9	59	20
24	12	"	6	6	3	"	19	11	60	18	6	7	19	11	59	55	"	12	25	5	6	3	40	17	3	58	52	5	6	17	3	58	24
25	12	30	6	8	4	"	19	"	59	29	6	8	19	"	59	2	Light	1	"	5	4	4	45	15	5	57	55	5	6	15	7	57	26
26	1	10	6	8	4	45	18	"	58	34	6	10	"	"	58	6		1	30	5	6	5	30	13	10	56	58	5	8	14	"	56	31
27	1	45	7	"	5	"	18	"	57	39	7	2	16	"	57	12		1	45	5	10	"	"	"	"	56	6	6	"	12	7	55	43
28	2	5	7	4	5	20	16	"	56	47	7	8	15	"	56	23		2	30	6	"	6	"	12	8	55	22	6	"	12	"	55	4
29	3	"	8	10	6	"	15	"	56	0	9	"	14	"	55	39		4	30	6	"	8	15	11	8	54	48	6	"	11	6	54	24
30	5	15	9	6	9	"	13	8	55	18	9	6	14	4	55	3		"	"	"	"	10	30	11	9	54	23	5	8	11	10	54	14
31																		7	15	5	7	12	"	12	6	54	7	5	6	12	9	54	7

Tide Table of November and December 1816.

November 1816.

Phases of the Moon.

☉ Full Moon, ... 5^h 9^m 12^m Morning,
 ☾ Last Quarter, ... 13^h 1^m 2^m Morning,
 ☀ New Moon, ... 19^h 3^m 17^m Afternoon
 ☽ First Quarter, ... 26^h 11^m " Evening
 ☉ Sun enters ♋ Sagittarius, 22^h 5^m 3^m Evening

December 1816.

Phases of the Moon

☉ Full Moon, ... 5^h 2^m 45^m Morning,
 ☾ Last Quarter, ... 12^h 9^m 46^m Morning,
 ☀ New Moon, ... 19^h 4^m 3^m Morning,
 ☽ First Quarter, ... 26^h 10^m 21^m Evening,
 ☉ Sun enters ♏ Capricornus, 22^h 10^m 21^m Morning,

Morning												Evening											
Low Water				High Water				Rise				Low Water				High Water				Rise			
at				at				at				at				at				at			
at				at				at				at				at				at			
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at				at				at				at				at				at			
at				at				at				at				at				at			

Side Table of January and February 187.

January 1817.

Plagues of the Moon.

Full Moon, D_n H_n M_n Evening,

Last Quarter, .. 10^h 5^m 36^m Evening,

New Moon, 17th 6th 32nd Evening.

First Quarter. 25" 5" 37" Evening,

Sun Entered Aquarius 20th 1st 50th Afternoon,

Февр. 1817.

Phases of the Moon. —

Lull Moon, . . . 2^u D. 8^u H. 9^u M. Morning,

Last Quarter. 9^h 1^u 40^m Morning.

New Moon, 16. 10. 13. Morning,

First Quarter, 24. 2nd 2^{1/2} e Afternoon,

Sun Entost^h Discos, 19. 4. 32. Morning,

Date	Morning							Evening								
	Low Water		High Water		Hor: Parrel	Bores		Low Water		High Water		Hor: Parrel	Bores			
	at	Obs'd	at	Obs'd				at	Obs'd	at	Obs'd					
	W. 1/2	W. 1/2	W. 1/2	W. 1/2	M. S.	W. 1/2	W. 1/2	M. S.	W. 1/2	W. 1/2	M. S.	W. 1/2	W. 1/2	M. S.		
1	9	4	1	20	10	9	56	3	3	10	12	8	56	21		
2	9	45	3	10	1	50	11	6	56	40	3	8	13	9	56	59
3	10	30	3	8	3	12	11	57	16	3	8	14	4	57	33	
4	11	5	3	8	3	15	12	9	57	49	3	6	14	8	58	4
5	11	30	3	6	3	45	13	2	58	18	3	6	14	9	58	30
6	12	11	3	6	4	30	13	3	58	40	3	6	14	8	58	49
7	1	15	3	6	4	55	12	8	58	56	3	6	13	8	59	2
8	1	55	3	6	5	30	12	5	59	6	3	6	11	11	59	7
9	2	30	3	7	5	20	12	10	59	11	3	8	12	11	59	11
10	3	15	3	8	7	11	12	2	59	11	3	7	11	6	59	7
11	4	11	3	6	7	30	11	2	59	6	3	7	10	10	59	3
12	5	11	3	6	9	5	10	8	58	58	3	6	10	10	58	52
13	11	11	11	11	10	30	10	7	58	45	3	8	10	10	58	36
14	6	30	3	8	12	11	10	8	58	26	3	8	11	2	58	15
15	8	30	3	8	1	11	1	58	2	3	6	11	10	57	48	
16	9	50	3	7	1	35	11	7	57	33	3	5	13	10	57	17
17	10	45	3	5	2	40	12	3	57	1	3	5	14	8	56	43
18	11	15	3	4	3	10	12	7	56	25	3	4	14	8	56	7
19	12	11	3	4	4	11	12	8	55	50	3	4	14	6	55	33
20	12	30	3	4	4	45	12	7	55	19	3	4	13	8	55	2
21	1	11	3	4	5	12	4	54	49	3	6	13	8	54	37	
22	1	30	3	7	5	30	12	11	54	27	3	7	12	6	54	20
23	1	50	3	8	11	11	11	54	15	3	10	11	9	54	12	
24	2	11	4	11	5	45	11	10	54	12	3	10	11	4	54	14
25	2	30	3	10	6	30	11	4	54	19	3	10	10	7	54	26
26	3	15	3	10	7	15	10	3	54	36	3	10	10	6	54	49
27	4	11	3	10	8	30	9	10	55	4	3	10	10	4	55	21
28	5	30	3	10	10	30	9	4	55	40	11	10	7	56	1	
29	5	45	3	9	11	45	9	8	56	23	3	10	10	6	56	46
30	8	30	3	8	12	30	10	3	57	10	3	8	12	2	57	33
31	9	30	3	8	1	30	11	11	57	56	3	6	13	3	58	19

Side Table of March and April 1817.

March, 1817.

Phases of the Moon.

	D.	H ^{rs}	M.	
Full Moon, . . .	3.	7 ⁿ	29,	Evening,
Last Quarter, . .	10 ⁿ	10 ⁿ	4 ⁿ	Morning,
New Moon, . . .	18 ⁿ	3 ⁿ	5 ⁿ	Morning,
First Quarter, . .	26 ⁿ	7 ⁿ	56 ⁿ	Morning,
Sun Enters V. Aries, .	21 ⁿ	4 ⁿ	48	Morning,

April 1817.

Phases of the Moon.

	D	H	M.
Full Moon, .	2 ⁿ	5 ⁿ	3 ^{re} Morning,
Last Quarter, .	8 ⁿ	9 ⁿ	22 ⁿ Evening,
New Moon, .	16 ⁿ	8 ⁿ	22 ⁿ Evening,
First Quarter, .	21 ⁿ	9 ⁿ	17 ⁿ Evening,
Sun enters 8 Taurus, .	20 ⁿ	5 ⁿ	22 ⁿ Evening

Morning										Evening					Morning										Evening											
Dates	Low Water				High Water				Hour Parrel	Low Water	High Water	Hour Parrel	Rores	Low Water				High Water				Hour Parrel	Low Water	High Water	Hour Parrel	Rores										
	at	Ebb'd to	at	Flow'd to	at Noon	Ebb'd to	Flow'd to	Midnight	at	Ebb'd to	at	Flow'd to	at Noon	Ebb'd to	Flow'd to	Midnight	at	Ebb'd to	at	Flow'd to	at Noon	Ebb'd to	Flow'd to	Midnight												
	W.	M.	feet	In.	W.	M.	feet	In.	M.S.	feet	In.	W.	M.	feet	In.	M.S.	W.	M.	feet	In.	W.	M.	feet	In.	M.S.											
1	9	15	3	4	1	45	10	7	59	5	3	"	12	10	57	29				10	30	2	2	1	50	16	6	61	9	2	"	17	"	61	16	Night
2	10	10	3	"	2	43	11	10	59	57	2	10	14	4	60	10				11	"	2	"	2	"	17	"	61	19	2	"	17	2	61	17	Heavy Bore
3	10	45	2	8	3	"	14	"	60	25	2	6	15	6	60	36				11	40	1	8	3	"	17	5	61	10	1	9	16	9	60	58	Heavy Bore
4	11	45	2	3	3	7	15	3	60	43	2	"	16	3	60	46	Night Bore			12	20	1	9	3	30	17	2	60	42	1	10	16	2	60	23	Heavy Bore
5	12	15	2	"	3	45	16	2	60	45	2	"	16	3	60	40	Midl. Bore			12	45	1	10	4	30	16	3	60	1	2	"	15	"	59	37	Midl. Bore
6	12	45	1	10	4	15	16	"	60	31	2	"	15	10	60	19	Heavy Bore			1	20	2	"	5	30	14	8	59	12	2	2	"	"	58	45	
7	1	30	2	3	5	"	15	7	60	4	2	4	14	10	59	47	Slight Bore			2	"	2	4	5	30	13	6	58	18	2	4	13	3	57	51	
8	1	55	2	5	5	45	14	4	59	28	2	8	13	4	59	8				2	15	3	"	6	30	12	3	57	25	3	4	11	8	57	0	
9	2	30	2	10	"	"	"	"	58	47	3	4	12	10	58	25				2	55	3	8	7	30	10	7	56	36	3	4	11	9	56	14	
10	2	45	3	4	5	45	12	"	58	3	3	5	11	10	57	42				4	15	3	6	9	"	9	6	55	53	3	5	10	8	55	34	
11	3	45	3	5	7	45	10	4	57	21	3	6	10	8	57	1				6	30	4	"	11	15	10	"	55	17	"	"	11	"	55	2	
12	5	45	3	6	10	"	9	7	56	42	"	"	10	8	56	23				8	"	3	9	12	15	11	3	54	48	3	6	12	"	54	36	
13	6	30	3	7	12	"	9	7	56	6	3	"	11	3	55	50				9	"	3	6	1	13	13	5	54	26	3	5	14	6	54	17	
14	8	15	3	"	1	15	10	8	55	35	2	10	12	"	55	21				9	40	3	2	1	30	14	5	54	10	3	"	15	3	54	4	
15	9	30	2	8	2	"	11	6	55	8	2	8	12	8	54	56				10	10	3	3	2	"	15	2	54	0	2	8	15	10	53	7	
16	10	"	2	4	2	10	12	3	54	45	2	4	12	8	54	35				10	30	2	7	2	10	15	8	53	55	2	7	16	"	53	55	Night Bore
17	10	30	2	4	2	30	13	4	54	26	2	6	14	8	54	19				11	"	2	7	2	30	15	9	53	56	2	8	15	2	53	58	Midl. Bore
18	11	15	2	7	2	45	14	8	54	12	2	8	15	3	54	6				11	30	2	9	2	45	15	5	54	2	2	9	14	6	54	7	Night Bore
19	11	40	2	8	3	10	16	"	54	2	2	9	16	"	53	59	Midlly Bore			12	"	2	10	3	20	14	6	54	14	2	10	13	6	54	12	
20	12	"	2	10	3	15	15	6	53	58	2	10	15	3	53	58	de. de.			12	30	2	10	4	"	12	3	54	32	3	"	13	9	54	44	
21	12	15	2	11	4	"	15	3	54	0	3	"	14	3	54	4	Slight de.			12	30	3	"	4	45	13	8	54	58	3	"	12	9	55	13	
22	12	40	3	2	4	30	14	6	54	10	3	2	13	6	54	18				1	"	3	"	5	30	13	3	55	30	3	6	"	"	55	49	
23	1	"	3	2	5	"	13	6	54	28	3	2	12	7	54	40				1	"	4	"	5	"	12	"	56	10	4	2	12	9	56	33	
24	1	15	3	4	5	45	12	6	54	54	3	6	"	"	55	11				1	30	4	6	6	"	11	6	56	58	5	6	12	"	57	24	
25	1	30	4	"	5	30	11	8	55	31	4	2	11	7	55	53				2	15	5	9	7	30	10	8	57	51	6	"	11	10	58	18	
26	2	"	4	6	6	"	11	"	56	16	4	6	10	10	56	42				5	"	5	7	9	45	10	8	58	45	"	"	12	10	59	12	
27	3	"	3	6	7	"	9	10	57	9	4	6	10	"	57	37				6	30	5	"	11	30	11	7	59	39	3	"	13	10	60	3	
28	5	30	4	4	10	15	9	8	58	6	"	"	11	3	58	35				8	"	3	"	12	"	13	4	60	25	3	"	15	"	60	45	
29	7	30	4	"	12	"	10	7	59	3	3	2	12	4	59	31				9	"	2	11	12	15	15	7	61	1	2	10	16	2	61	12	
30	8	30	3	6	1	"	12	3	59	57	3	"	14	"	60	21				9	40	2	8	1	3	17	"	61	19	2	4	17	2	61	21	Night Bore
31	9	20	2	10	1	30	14	7	60	41	2	4	15	10	60	57																				

Side Table of May and June 1817.

May 1817.

Phases of the Moon.

Full Moon, .. 1^h 1^m 2^h Afternoon,
 Last Quarter, .. 8^h 9^m 3^h Morning,
 New Moon, .. 16^h 1^m 5^h Noon,
 First Quarter, .. 24^h 6^m 3^h Morning,
 Full Moon, .. 30^h 9^m 15^h Evening,
 Sun enters Π Gemini, .. 21^h 5^m 4^h Afternoon

June 1817.

Phases of the Moon.

Last Quarter, .. 2^h 1^m 5^h Evening,
 New Moon, .. 15^h 9^m 3^h Morning,
 First Quarter, .. 22^h 1^m 5^h Noon,
 Full Moon, .. 29^h 5^m 12^h Morning,
 Sun enters γ Cancer, .. 22^h 2^m 24^h Morning,

Morning

Morning

Evening

Date	Low Water				High Water				Hor. Parrel				Bore	Low Water				High Water				Hor. Parrel				Bore								
	at		Ebbes		at		Flowes		at		Ebbes			at		Flowes		at		Ebbes		at		Flowes										
	to		to		to		to		to		to			to		to		to		to		to		to										
	Ho.	feet	in.	Ho.	feet	in.	M	S.	feet	in.	feet	in.		M	S.	Ho.	feet	in.	Ho.	feet	in.	M	S.	feet	in.		feet	in.	M	S.				
1	10	15	2	4	1	30	17	7	61	18	2	4	17	7	61	11	Heavy Bore	11	15	3	2	3	16	9	59	23	3	2	15	4	59	8	Midd. J.	
2	11	"	2	2	2	20	17	9	60	59	2	2	17	2	60	43	Very Heavy	11	45	3	5	3	45	16	2	58	42	3	7	14	9	58	15	
3	11	40	2	3	3	"	17	7	60	22	2	4	16	10	59	58	2 ^d B.	12	10	3	10	4	40	15	7	57	47	4	"	13	10	57	19	
4	12	20	2	4	3	55	16	7	59	32	2	4	15	2	59	5	Midd. J.	12	40	4	2	5	30	14	3	56	52	4	3	12	9	56	26	
5	1	15	2	6	4	45	15	4	58	37	2	8	12	10	58	8		1	30	4	4	"	"	"	"	56	2	4	6	13	3	55	40	
6	1	"	3	"	5	45	13	8	57	39	3	2	"	"	57	11		2	"	5	"	6	15	12	3	55	20	5	4	13	3	55	2	
7	1	45	3	6	5	30	12	"	56	45	3	4	12	3	56	20		2	"	6	"	7	15	12	"	54	46	6	4	13	"	54	33	
8	2	40	4	"	7	"	11	"	55	50	4	4	11	7	55	34		3	25	6	10	8	15	13	"	54	23	7	"	13	"	54	15	
9	4	30	4	2	9	"	10	3	55	15	"	"	11	7	54	58		5	30	6	6	9	25	13	3	54	7	"	"	13	1	54	5	
10	4	30	4	2	11	"	10	6	54	43	4	"	11	8	54	30		5	50	6	"	11	15	13	4	54	4	5	10	13	4	54	5	
11	7	"	3	10	12	15	11	3	54	20	3	10	12	"	54	12		7	"	5	8	12	7	13	11	54	7	5	6	14	2	54	11	
12	8	"	3	8	12	40	12	2	54	6	3	8	12	10	54	1		8	15	5	4	12	45	14	4	54	17	5	"	14	4	54	25	
13	8	40	3	7	1	"	13	7	53	58	3	7	14	"	53	57		9	"	5	"	1	15	1	54	34	4	8	14	10	54	44		
14	9	15	3	7	1	15	15	2	53	58	3	7	15	"	54	0		9	30	4	5	1	40	15	5	54	55	4	8	14	10	55	6	
15	9	45	3	7	1	45	16	"	58	3	3	7	15	3	54	8		10	"	4	8	2	"	15	10	55	19	4	4	15	2	55	33	
16	10	15	3	"	1	45	16	"	54	14	3	8	15	"	54	21	Light Bore	10	30	4	4	2	45	16	3	55	47	4	4	15	2	56	1	
17	10	30	3	9	2	15	16	2	54	29	3	7	14	10	54	39	Light Bore	11	20	4	7	3	15	16	4	56	16	5	"	15	2	56	32	
18	11	15	3	7	3	"	15	10	54	50	3	7	13	10	55	2	Light Bore	11	55	5	2	4	"	16	8	56	48	5	6	15	3	57	4	
19	11	30	3	7	3	30	14	10	55	15	3	7	13	3	55	29		12	30	5	7	4	45	16	6	57	20	6	3	15	3	57	36	
20	12	"	3	8	4	20	14	7	55	45	3	8	12	3	56	2		1	"	6	4	5	30	15	3	57	53	6	8	"	"	58	9	
21	12	35	3	8	5	"	13	8	56	20	3	8	"	"	56	39		2	"	7	"	5	15	15	"	58	26	7	2	15	7	58	42	
22	12	50	3	8	5	"	12	8	56	59	3	10	12	8	57	20		3	"	7	2	7	"	14	8	58	57	7	2	15	2	59	12	
23	1	30	3	11	6	"	11	6	57	42	4	"	12	2	58	5		4	45	7	"	8	30	14	"	59	26	6	10	15	3	59	39	
24	2	45	4	4	7	15	11	3	58	28	4	6	12	"	58	51		5	45	6	8	10	"	14	10	59	50	"	"	15	3	59	59	
25	4	15	5	"	8	15	11	3	59	13	4	10	12	6	59	35		6	30	6	8	10	45	15	6	60	5	5	10	15	6	60	8	
26	6	"	4	8	10	30	12	6	59	55	"	"	13	"	60	13		7	15	6	4	12	"	16	5	60	9	6	4	16	5	60	6	
27	7	"	3	8	11	40	14	"	60	28	3	4	14	10	60	41		8	30	6	6	12	15	17	8	60	2	6	4	17	"	59	53	
28	8	"	3	"	12	15	15	3	60	50	3	"	15	3	60	54		9	15	6	4	1	15	18	8	59	41	6	4	18	8	59	26	
29	9	"	3	"	1	"	16	3	60	55	3	2	15	10	60	52		10	15	6	4	1	30	19	2	59	8	6	6	18	6	58	47	
30	9	45	3	"	1	45	16	10	60	44	3	3	15	10	60	32	Light Bore	11	"	6	4	2	45	19	3	58	25	6	6	18	"	58	2	Light Bore
31	10	40	3	1	2	30	17	"	60	16	3	2	15	8	59	56	Midd. J.																	

Tide Table of July and August 1817.

July 1817.

Phases of the Moon.

Last Quarter, .. 5^h 21^m 25^s Afternoon,
 New Moon, .. 13^h 22^m 17^s Afternoon,
 First Quarter, .. 20^h 23^m 56^s Afternoon,
 Full Moon, .. 27^h 20^m 22^s Afternoon,
 Sun enters ♍ Lib., .. 23^h 1^m 16^s Afternoon,

August 1817.

Phases of the Moon.

Last Quarter, .. 5^h 8^m 45^s Morning,
 New Moon, .. 13^h 0^m 54^s Noon,
 First Quarter, .. 19^h 10^m 44^s Night,
 Full Moon, .. 27^h 1^m 30^s Morning,
 Sun enters ♎ Virgo, .. 23^h 7^m 40^s Evening

Date	Morning						Evening						Morning						Evening																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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	to	to	to	to	Noon	to	to	to	to	Noon	to	to	to	to	to	to	Noon	to	to	to	to	to	to	to																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h	m	h	m	h		h

Tide Table of September and October 1817.

September 1817.

Phases of the Moon.

Last Quarter, . . . 4ⁿ H 2ⁿ M. 56ⁿ Morning,

New Moon, . . . 11^h 0^m 37^m New Moon,

First Quarter. . . 18^h 4^m 57^h Morning,

Full Moon, . . . 25th 3rd 41st Afternoon

Sun enters Libra . . . 23rd 4th 22nd Afternoon,

October 1817.

Phases of the Moon.

Last Quarter, . . . D. H. M.
3. 8 36, Evening,

A New Room, - 10" 10" 7" & light,

First Quater, - 12^u 1^u 38^u Afternoon,

Full Moon, - 25th 8th 4th Morning,

Sun enters μ Scorpio - 24th Oct 8 Midnight,

Morning										Evening					Morning										Evening									
Date	Low Water			High Water			Hor: Parrel	Low Water	High Water	Hor: Parrel	Bore	Low Water			High Water			Hor: Parrel	Low Water	High Water	Hor: Parrel	Bore												
	at	Ebb'd	at	Flow'd	at	Flow'd	at	Ebb'd	at	Flow'd		at	Ebb'd	at	Flow'd	at	Ebb'd	at	Flow'd	at	Ebb'd		at	Flow'd										
	H.	M.	Feet	H.	M.	Feet	M.S.	H.	M.	Feet		H.	M.	Feet	M.S.	H.	M.	Feet	H.	M.	Feet		M.S.	H.	M.	Feet	H.	M.	Feet	M.S.				
1	1	9	10	4	"	19	8	54	11	10	"	19	4	54	11		12	50	8	4	4	30	16	8	54	20	8	4	16	8	54	30		
2	1	15	9	10	5	"	18	3	54	13	10	2	18	3	54	17		1	"	8	8	5	15	15	6	54	42	8	10	15	5	54	57	
3	1	45	10	2	5	30	16	6	54	24	10	3	"	"	54	34		1	30	9	"	"	"	"	55	14	4	6	13	10	55	33		
4	2	"	10	3	5	30	16	6	54	46	10	4	15	6	55	1		2	5	9	6	5	30	13	10	55	55	8	6	12	8	56	19	
5	3	"	11	8	6	45	15	6	55	18	12	"	14	10	55	1		5	30	9	"	7	15	12	8	56	44	"	"	13	"	57	11	
6	5	"	11	"	8	45	14	10	55	58	"	"	15	6	56	21		5	"	9	"	10	"	14	3	57	39	9	"	14	7	58	7	
7	6	"	11	"	11	"	16	3	56	45	10	7	16	2	57	9		7	"	8	6	11	15	16	"	58	35	8	4	16	6	59	3	
8	7	15	10	6	11	30	17	10	57	34	9	8	17	10	57	59		8	30	8	"	12	30	17	2	57	29	8	"	17	7	59	52	
9	8	45	9	7	12	30	19	2	58	23	9	"	19	"	58	46		9	30	7	10	1	"	18	5	60	13	7	6	18	7	60	31	
10	9	45	8	10	1	15	19	10	59	7	8	6	19	10	59	26		10	"	7	8	1	15	19	2	60	45	7	4	19	5	60	54	
11	10	30	8	6	1	50	20	7	59	42	8	8	20	4	59	55	Light Bore	10	30	7	2	1	40	19	6	60	57	7	2	20	"	61	0	midling
12	11	"	8	8	2	15	21	1	60	5	8	4	20	6	60	11	midling	11	10	7	2	2	10	19	8	60	56	7	2	20	"	60	48	"
13	11	40	8	6	2	45	21	1	60	14	8	8	21	10	60	13	Harvey	11	45	7	2	2	45	19	"	60	36	7	2	19	3	60	21	Right
14	12	15	8	8	3	30	21	9	60	9	9	"	21	9	60	2	"	12	45	7	2	3	45	18	"	60	3	7	"	18	3	59	42	"
15	1	"	9	"	4	"	20	8	59	53	9	3	20	6	59	42	"	1	"	7	"	4	40	16	7	59	20	7	"	16	7	58	57	"
16	1	15	9	3	4	40	20	"	59	29	9	8	20	"	59	15		1	45	7	"	"	"	"	"	58	34	7	"	15	3	58	10	
17	1	45	9	8	5	15	18	7	58	59	9	10	"	"	58	43		2	15	7	6	5	30	15	3	57	46	7	8	14	8	57	23	
18	2	40	10	"	5	30	18	7	58	26	11	4	16	7	58	9		3	30	7	10	7	30	14	7	57	1	8	"	14	7	56	40	
19	3	30	11	4	7	"	16	7	57	52	11	6	15	8	57	35		"	"	"	"	9	15	14	6	56	20	7	8	14	6	56	2	
20	5	45	11	"	9	"	15	8	57	18	"	"	15	10	57	1		5	30	8	"	10	45	14	10	55	45	7	6	14	10	55	29	
21	6	30	10	4	10	50	16	10	56	45	9	8	17	"	56	29		7	30	7	5	11	45	15	5	55	14	7	4	15	7	55	1	
22	8	12	9	6	12	"	18	3	56	14	9	3	18	"	56	0		8	45	7	3	12	45	16	1	54	49	7	2	16	5	54	38	
23	9	15	9	"	1	"	18	10	55	45	8	10	18	8	55	31		9	30	7	2	1	30	16	6	54	29	7	2	16	10	54	21	
24	10	"	8	7	1	30	19	4	55	18	8	6	19	3	55	6		10	"	7	"	2	"	16	10	54	14	7	"	17	2	54	8	
25	10	30	8	4	1	45	19	5	54	55	8	7	19	3	54	44		10	30	7	"	2	15	16	10	54	4	6	11	17	4	54	1	
26	11	"	8	6	2	15	19	6	54	34	8	6	19	3	54	25		11	"	6	10	2	40	16	7	53	58	6	8	17	4	53	57	
27	11	"	8	6	2	15	19	6	54	34	8	6	19	3	54	25		11	30	6	7	3	"	16	8	53	58	6	8	16	8	54	0	
28	11	30	8	6	2	45	19	"	54	18	8	6	19	"	54	12		11	50	6	8	3	30	16	2	54	4	6	8	16	8	54	10	
29	12	"	8	6	3	20	18	9	54	7	8	6	18	6	54	4		12	30	6	8	4	"	15	6	54	17	6	10	15	6	54	26	
30	12	20	8	6	3	45	18	3	54	3	8	4	18	4	54	4		12	45	6	10	4	30	15	"	54	38	7	"	15	1	54	52	
31	12	35	8	4	4	15	17	9	54	7	8	4	17	8	54	12		12	50	7	1	5	"	14	3	55	8	7	4	14	"	55	26	

Tide Table of November and December 1817.

November, 1817.

Phases of the Moon.

Last Quarter, ... 2^h 5^m Noon,
 New Moon, ... 9^h 8^m 2^h Morning,
 First Quarter, ... 16^h 1^m 38^m Morning,
 Full Moon, ... 24^h 3^m 50^m Morning,
 Sun enters \uparrow Sagittarius, 22^h 8^m 48^m Evening,

December 1817.

Phases of the Moon.

Last Quarter, 2^h 2^m 13^m Morning,
 New Moon, ... 8^h 6^m 27^m Evening,
 First Quarter, ... 15^h 5^m 23^m Evening,
 Full Moon, ... 23^h 10^m 53^m Night,
 Last Quarter, ... 31^h 1^m 27^m Afternoon,
 Sun enters \uparrow Capricornus 22^h 9^m 13^m Morning,

Date	Morning							Evening							Morning							Evening						
	Low Water			High Water			Hor. Par.	Low Water			High Water			Hor. Par.	Low Water			High Water			Hor. Par.	Low Water			High Water			Hor. Par.
	at	Ebb	Flow	at	Ebb	Flow	at Noon	at	Ebb	Flow	at	Ebb	Flow	at Midnight	at	Ebb	Flow	at	Ebb	Flow	at Noon	at	Ebb	Flow	at	Ebb	Flow	at Midnight
	Hr.	M.	ft.	Hr.	M.	ft.	M.S.	Hr.	M.	ft.	Hr.	M.	ft.	M.S.	Hr.	M.	ft.	Hr.	M.	ft.	M.S.	Hr.	M.	ft.	Hr.	M.	ft.	M.S.
1	1	10	7	4	"	"	"	55	46	7	"	13	"	56	8													
2	2	"	7	3	5	30	13	5	56	23	7	6	13	3	56	59												
3	3	50	7	5	7	"	13	"	57	26	7	4	13	"	57	55												
4	"	"	"	"	8	30	13	"	58	24	6	10	13	3	58	53												
5	6	"	6	10	10	15	13	5	59	21	6	8	13	7	59	49												
6	7	45	6	7	12	"	14	6	60	12	6	"	14	10	60	34												
7	9	"	5	10	12	45	15	7	60	53	5	4	16	"	61	8												
8	9	40	5	4	1	"	16	9	61	18	5	"	18	2	61	23												
9	10	30	5	"	1	50	17	3	61	23	4	8	19	"	61	18	Small Bore											
10	11	"	4	8	2	30	17	7	61	9	4	8	19	"	60	55	midling											
11	11	30	4	8	3	"	17	8	60	36	4	10	18	2	60	15	or											
12	12	"	5	"	3	50	16	3	59	51	5	2	16	8	59	25												
13	1	"	5	4	5	30	14	8	58	57	5	6	15	3	58	29												
14	1	45	5	7	"	"	"	"	58	1	5	8	13	5	57	33												
15	2	30	6	"	6	30	13	10	57	6	6	"	12	"	56	40												
16	3	30	5	10	7	15	12	7	56	16	5	10	11	3	55	55												
17	5	30	6	"	8	45	12	3	55	35	"	"	11	7	55	16												
18	6	"	6	"	10	30	12	6	55	0	6	"	12	7	54	46												
19	7	"	5	10	11	45	13	"	54	34	5	10	13	5	54	23												
20	8	"	5	10	12	45	13	4	54	15	5	8	14	3	54	8												
21	8	45	5	8	1	10	13	10	54	3	5	7	15	"	54	0												
22	9	15	5	7	1	30	14	4	53	57	5	7	15	8	53	56												
23	10	"	5	7	2	15	14	7	53	57	5	4	15	8	53	59												
24	10	45	5	4	2	45	14	"	54	1	5	2	15	2	54	5												
25	11	15	5	"	3	15	13	10	54	11	5	"	15	"	54	18												
26	11	45	5	"	3	59	13	7	54	26	5	"	14	6	54	35												
27	12	"	5	"	4	15	13	4	54	46	5	"	14	4	54	58												
28	12	30	5	"	4	30	13	3	55	12	5	"	14	2	55	28												
29	1	"	5	2	5	15	13	"	55	46	5	4	13	8	56	5												
30	1	30	5	7	6	"	12	10	55	26	5	8	12	4	56	48												
31																												

Tide Table of January and February 1818.

January 1818
Phases of the Moon,

New Moon, ...	7 ^h	5 ^m	30 ^h Morning,
First Quarter, ...	14 ^h	0 ^m	38 ^h Afternoon,
Full Moon, ...	22 ^h	4 ^m	20 ^h Afternoon,
Last Quarter, ...	29 ^h	10 ^m	36 ^h Night,
Sun enters ...	20 ^h	7 ^m	36 ^h Evening,

February 1818
Phases of the Moon,

New Moon, ...	5 ^h	5 ^m	32 ^h Morning,
First Quarter, ...	13 ^h	9 ^m	56 ^h do.
Full Moon, ...	21 ^h	7 ^m	23 ^h do.
Last Quarter, ...	28 ^h	6 ^m	21 ^h do.
Sun enters ♉ Pisces, ...	19 ^h	10 ^m	20 ^h do.

Morning										Evening				Morning										Evening				
Date	Low Water			High Water			Hor. Parrel		Bore	Low Water			High Water			Hor. Parrel		Bore	Low Water			High Water			Hor. Parrel		Bore	
	at	Obs'd	at	Obs'd	at	Obs'd	at	Obs'd		at	Obs'd	at	Obs'd	at	Obs'd	at	Obs'd		at	Obs'd	at	Obs'd	at	Obs'd				
	Hrs.	M.	S.	Hrs.	M.	S.	M.	S.		Hrs.	M.	S.	Hrs.	M.	S.	M.	S.		Hrs.	M.	S.	Hrs.	M.	S.	M.	S.		
1	4	30	3	10	8	"	11	4		4	"	11	2		"	"	"	"	10	30	9	7		3	8	11	3	
2	5	30	3	9	9	30	10	11		3	9	11	2		7	"	4	"	12	"	10	3		4	"	12	2	
3	"	"	"	"	11	"	10	11		3	8	11	6		8	45	8	1	15	10	10		3	6	13	3		
4	7	"	4	"	12	"	11	2		3	8	13	"		10	"	3	5	2	"	12	"		3	2	14	5	
5	8	30	4	"	1	"	11	11		3	6	14	3		10	45	3	"	2	45	13	"		3	"	15	2	
6	9	30	3	5	1	45	12	10		3	5	15	2		11	30	2	9	3	"	13	10		3	"	15	4	
7	10	45	3	2	2	30	13	8		3	"	15	9		12	15	2	8	3	45	13	10		2	8	15	"	
8	11	30	3	"	3	"	13	9		3	3	15	9		12	45	2	5	4	30	13	10		3	"	14	7	
9	12	"	3	1	4	"	13	11		3	2	15	8		1	15	3	"	5	"	13	5		3	"	13	5	
10	1	"	3	3	4	45	13	7		3	4	14	6		1	45	3	2	5	45	12	6		3	3	12	5	
11	1	30	3	5	5	30	12	11		3	7	13	5		2	"	3	3	"	"	"	"		3	4	12	"	
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13	2	30	3	10	6	"	12	4		4	"	11	10		2	45	3	6	6	45	10	7		3	8	10	3	
14	3	"	3	10	6	30	11	4		4	1	10	7		3	"	3	10	7	45	10	"		3	11	10	"	
15	3	30	4	"	7	45	10	5		4	"	10	2		3	45	4	"	8	30	9	3		4	4	9	10	
16	4	30	4	"	9	"	10	"		4	1	9	10		6	"	4	2	11	"	9	"		"	"	10	6	
17	"	"	"	"	10	30	9	6		4	4	10	"		7	30	4	"	12	45	10	"		4	"	11	6	
18	6	30	4	4	11	45	9	7		4	"	11	3		9	"	3	10	1	45	10	7		3	6	12	6	
19	7	45	4	2	1	"	10	4		4	"	12	3		10	"	3	6	2	15	11	9		3	6	13	8	
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21	10	"	3	11	2	30	11	6		3	10	13	6		11	15	2	10	3	"	13	8		2	9	15	6	
22	10	45	3	10	3	"	12	4		3	8	14	4		12	"	2	7	3	"	14	10		3	6	16	"	
23	11	30	3	8	3	30	12	7		3	8	14	7		12	5	2	4	3	30	15	8		2	4	16	6	
24	12	"	3	4	4	"	13	"		3	3	14	7		12	45	2	4	4	"	15	9		2	2	16	6	
25	12	30	3	3	4	15	13	6		3	4	14	10		1	15	2	2	5	"	15	4		2	5	15	6	
26	1	15	3	4	5	"	13	6		3	4	14	3		1	45	2	6	5	30	14	8		2	6	14	1	
27	1	45	3	4	5	30	13	2		3	4	13	3		2	22	2	10	"	"	"	"		2	10	13	5	
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Night Boat
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Tide Table of March and April 1818.

March 1818.

Phases of the Moon,

New Moon, 7^h 6^m 5^s Morning,
First Quarter, 15^h 7^m 2^s Do.
Full Moon, 22^h 7^m 55^s Evening,
Last Quarter, 29^h 1^m 31^s Afternoon,
Sun enters V. Aries, 21^h 10^m 38^s Morning,

April 1818.

Phases of the Moon,

New Moon, 5^h 9^m 38^s Evening,
First Quarter, 14^h 1^m 45^s Morning,
Full Moon, 21^h 6^m 7^s Morning,
Last Quarter, 27^h 8^m 54^s Evening,
Sun enters ♈ Taurus 20^h 11^m 14^s Night,

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Side Table of May and June 1818.

• May 1818. —

Phases of the Moon,

• New Moon, . . . 3^h 5^m H_m M. 20. afternoon

First Quarter, 13th 5th 2nd Afternoon

Full Moon, . . . 20ⁿ 2ⁿ 23^p Afternoon

Last Quarter, ... 27th 5th 43rd Morning

Sun enters II. Gemini . . 21. 11. 42^h Night.

June 1818.

Phases of the Moon.

New Moon, D^y 4th H^y 5th M^y 7th Morning,

First Quarter. 12_n 4_n 45_n 1_o—

Full Moon, . 18th ju 22nd Evening

Last Quarter, - 25ⁿ 4ⁿ 40^{nc} Afternoon

Entered . . . 22nd 8th 17th Morning

Morning										Evening										Morning										Evening									
Low Water		High Water		Star.	Low Water		High Water	Star.	Bores	Low Water		High Water		Star.	Low Water		High Water	Star.	Bores	Low Water		High Water		Star.	Low Water		High Water	Star.	Bores										
at	Ebb'd to	at	Flood to	noon	Ebb'd to	Flood to	midnight			at	Ebb'd to	at	Flood to	noon	Ebb'd to	Flood to	midnight			at	Ebb'd to	at	Flood to	noon	Ebb'd to	Flood to	midnight												
M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.										
1	7	45	3	6	12	30	12	"		2	10	13	7							8	"	4	5	1	"	14	4												
2	9	"	2	8	1	"	13	5		3	"	14	"							8	30	4	3	1	30	14	8												
3	9	30	2	10	1	30	4	5		2	10	14	3							9	30	4	"	2	"	15	3												
4	10	"	2	8	2	"	14	10		3	"	14	3							10	"	4	2	2	15	15	6												
5	10	30	2	10	2	20	15	"		3	"	15	"							10	45	4	2	2	45	15	7												
6	11	"	2	10	2	45	15	3		3	1	15	"							11	15	4	"	3	25	15	4												
7	11	15	3	"	3	"	15	"		3	2	14	4							11	45	4	"	3	50	15	"												
8	12	"	3	2	3	30	14	9		3	3	13	6							12	"	4	6	4	40	15	2												
9	12	5	3	2	4	"	14	3		3	6	13	"							12	30	5	"	5	15	14	5												
10	12	30	3	2	4	55	13	3		3	4	12	"							1	"	5	"	5	30	12	"												
11	12	45	3	6	5	45	12	6		3	8	"	"							2	"	5	7	6	30	12	"												
12	1	"	3	10	6	"	11	3		4	6	12								3	15	5	7	7	45	12	"												
13	1	50	4	4	6	30	11	3		5	"	11	8							4	30	5	7	9	"	12	4												
14	3	"	5	6	7	30	10	10		6	"	12	8							6	"	5	2	10	15	12	10												
15	5	20	6	"	9	30	12	3		"	"	13	10							6	"	5	"	11	"	13	7												
16	6	30	6	"	11	30	13	2		5	10	14	8							7	30	4	8	12	"	14	10												
17	7	"	5	6	12	10	14	8		4	8	15	7							8	45	4	"	12	45	15	10												
18	8	30	4	"	12	10	16	10		3	1	17	"							9	45	3	8	1	15	17	1												
19	9	15	3	"	12	45	17	6		3	"	17	8							10	30	3	6	2	"	17	5												
20	10	"	3	"	1	45	18	"		3	"	17	8							11	20	3	4	2	55	17	9												
21	11	"	2	10	2	15	18	3		3	"	17	8							12	"	3	10	3	20	17	5												
22	11	30	2	9	2	54	18	"		3	"	16	8							1	15	4	7	4	45	16	9												
23	12	"	2	8	3	45	17	2		3	4	15	6							1	30	5	2	5	30	15	8												
24	12	45	3	2	4	45	16	"		4	4	14	6							2	"	5	4	6	"	14	"												
25	1	20	4	"	5	45	15	"		4	7	"	"							2	45	5	8	7	"	14	8												
26	2	"	4	8	6	"	13	2		5	"	14	"							3	45	6	1	8	"	13	4												
27	3	"	5	1	7	"	12	6		5	"	12	8							5	"	6	4	9	15	13	1												
28	4	30	5	"	9	"	12	3		5	"	12	8							6	"	6	2	10	20	13	"												
29	5	45	4	10	10	15	12	6		"	"	13	2							6	30	6	"	11	30	13	9												
30	6	30	4	10	11	30	13	"		4	4	13	7							7	15	6	"	12	"	14	6												
31	7	30	4	7	12	15	14	"		5	"	14	"																										

Tide Table of July and August 1818.

July 1818.

Phases of the Moon,

New Moon, -- 3^h 8^m 12 Evening,
 First Quarter, 11^h 1^m 3^h Afternoon,
 Full Moon, -- 18^h 4^m 8^m Morning,
 Last Quarter, -- 25^h 6^m 27^m Evening,
 Enters R, -- 23^h 7^m 9^m Evening,

August 1818.

Phases of the Moon,

New Moon, -- 2^h 10^m 17^m Morning,
 First Quarter, -- 9^h 8^m 17^m Evening,
 Full Moon, -- 16^h 11^m 59^m Morning,
 Last Quarter, -- 23^h 11^m 6^m Night,
 New Moon, -- 31^h 11^m 22^m Evening,
 Sun enters, M, -- 24^h 1^m 36^m Morning,

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Middle of Bay

Small "

Middle of Bay

Heavy "

Light "

Tide Table of September and October 1818.

September 1818

Phases of the Moon.

First Quarter, 8^o 2 3^o Morning,

• New Moon, .. 14,, 10 8,, Night,

Last Quarter .. 22nd 5th 50th Afternoon

Hull & Moon, ... 30. 11. 42. & Morning

Butlers 2 p. 23" 10 13" Night

October 1818.

Phases of the Moon,

First Quarter, . . 7. 17. 59 morning

Full Moon, . . . 14, 16, 23 &c. .

Last Quarter, ... 22, 1, 20 Afternoon

New Moon, . . . 29th 11th 22 Night

Enters m. . 24. b. 22 Morning

Morning							Evening							Morning							Evening						
Low Water	High Water	Hor:	Low Water	High Water	Hor:	Pores	Low Water	High Water	Hor:	Low Water	High Water	Hor:	Low Water	High Water	Hor:	Pores	Low Water	High Water	Hor:	Low Water	High Water	Hor:	Pores				
at Ebbs	at Flood	Noon	at Ebbs	at Flood	Midnight		at Ebbs	at Flood	Noon	at Ebbs	at Flood	Midnight		at Ebbs	at Flood	Noon	at Ebbs	at Flood	Midnight		at Ebbs	at Flood	Noon				
Hr.	Mt.	Inch	M.S.	Hr.	Mt.	Inch	M.S.	Hr.	Mt.	Inch	M.S.	Hr.	Mt.	Inch	M.S.	Hr.	Mt.	Inch	M.S.	Hr.	Mt.	Inch	M.S.				
1	10 50	9 "	2 "	21 3				9 6	20 5	Night Box	11 "	11 6	2 "	22 3				11 6	22 5								
2	11 15	9 "	2 45	21 4				9 5	20 6	middle	11 30	11 6	2 30	22 4				11 6	22 3				Middle Box				
3	11 45	9 1	3 "	21 4				9 4	20 1	Heavy	12 "	11 6	3 "	21 8				11 6	21 10								
4	12 20	9 "	3 30	21 1				9 6	20 "	so	12 45	11 6	3 30	21 "				11 6	21 2								
5	1 "	9 "	3 45	20 6				9 6	20 "	Night	1 30	11 6	4 30	20 "				11 10	20 "								
6	1 15	9 6	4 30	19 10				10 "	19 6		2 "	12 "	5 "	18 4				12 "	17 2								
7	2 "	10 "	5 15	18 4				10 "	18 "		3 "	12 2	5 30	18 4				12 6	17 "								
8	2 30	10 5	" "	" "				10 8	17 "		4 45	12 3	7 30	17 3				12 6	17 "								
9	4 "	10 11	6 30	16 7				11 "	16 "		6 "	12 3	9 30	17 3				" "	17 4								
10	6 "	11 "	9 "	16 3				" "	16 6		6 45	12 2	11 30	18 7				11 8	18 11								
11	6 30	10 8	11 20	18 4				10 8	18 4		8 30	11 7	11 45	20 "				11 8	20 3								
12	8 45	10 3	12 "	20 2				10 6	20 "		9 15	11 4	12 30	20 9				11 4	20 11								
13	9 40	10 4	1 10	21 3				10 6	20 10		10 "	11 2	1 "	20 11				11 "	20 11								
14	10 30	10 8	1 30	21 11				10 10	21 8		10 30	10 10	1 30	21 1				10 8	21 4								
15	10 45	10 8	2 "	22 "				11 8	21 10		11 "	10 8	2 "	21 1				10 7	21 4								
16	11 30	11 "	2 15	22 "				11 6	21 10		11 30	10 6	2 30	20 3				10 2	20 6								
17	12 "	11 "	3 5	21 8				11 6	21 8		12 "	10 2	3 "	19 4				10 2	19 7								
18	12 30	11 "	3 30	21 "				11 6	21 "		12 30	10 "	3 30	18 6				9 10	19 "								
19	12 55	11 "	4 "	20 2				11 8	20 2		1 "	9 9	4 "	17 6				9 10	17 10								
20	1 15	11 10	4 30	19 "				11 10	19 "		1 15	9 10	4 30	16 2				9 10	16 6								
21	1 30	11 8	5 "	17 4				11 10	17 4		1 30	9 10	5 "	14 9				9 10	" "								
22	1 45	12 "	5 45	16 6				12 "	" "		2 "	10 "	5 15	15 2				10 2	13 3								
23	2 15	12 9	6 "	16 4				12 "	15 4		3 30	10 3	6 "	13 6				10 3	13 2								
24	4 "	13 3	7 45	15 4				13 1	15 2		" "	" "	9 "	13 6				9 3	14 7								
25	" "	" "	10 15	16 "				12 "	16 "		6 "	9 "	10 45	15 1				8 4	15 6								
26	7 "	11 10	11 30	17 4				11 8	17 6		7 "	8 4	11 30	16 4				7 9	16 10								
27	8 "	11 4	12 "	18 9				11 5	17 1		8 "	7 8	12 "	17 3				7 3	17 10								
28	9 15	11 3	12 45	20 2				11 4	21 "		9 "	7 "	1 "	17 10				6 11	18 6								
29	10 "	11 3	1 "	21 4				11 6	21 6		10 "	6 10	1 30	18 3				6 5	19 "								
30	10 30	11 6	1 15	21 11				11 4	22 1		10 30	6 5	2 "	18 5				6 5	19 "								
31											11 15	6 3	2 45	18 4				6 4	18 11								

Tide Table of November and December. 1818.

November 1818—

Phases of the Moon,

First Quarter. $\frac{1}{5}$ $\frac{1}{3}$ $\frac{1}{18}$ Afternoon

Full Moon, . . 13th 3rd 43rd Morning,

Last Quarter, . . 21,, 8,, 23,, ———

New Moon, . . 28ⁿ 10ⁿ 21ⁿ —————

Enters, \uparrow . . 23" 2 44" —

December 1818.

Phases of the Moon,

First quarter, . . . D. H. M.
5^h 1^h 13^h Morning

Full Moon, .. 12^h 10^h 13^h Night.

Last Quarter, . . 21^u 1^a 26^u Morning

New Moon, 27th 8th 46th Evening

Enters 16. -- 22nd 3rd 11th Afternoon,

Morning										Evening					Morning										Evening											
Date	Low Water		High Water		Hor: Parrel	Bored	Low Water		High Water		Hor: Parrel	Bored	Low Water		High Water		Hor: Parrel	Bored	Low Water		High Water		Hor: Parrel	Bored												
	at	Ebb'd to	at	Flood to	Noon		Ebb'd to	Flood to	midnight	at	Ebb'd to		at	Flood to	Noon	Ebb'd to	Flood to		midnight	at	Ebb'd to	at	Flood to		Noon	Ebb'd to	Flood to	midnight								
	M.S.	T.H.	A.H.	T.H.	A.H.		M.S.	T.H.	A.H.	T.H.	A.H.		M.S.	T.H.	A.H.	T.H.	A.H.		M.S.	T.H.	A.H.	T.H.	A.H.		M.S.	T.H.	A.H.	T.H.	A.H.							
1	11	45	6	4	3	"	17	11					6	6	18	4					12	30	4	"	4	30	14	8					4	2	15	8
2	12	30	6	6	3	45	17	"					6	6	17	4					1	30	4	2	5	"	4	"					4	4	15	"
3	1	"	6	6	5	"	15	8					6	6	15	10					2	"	4	5	"	"	"	"					4	5	13	"
4	1	30	6	7	"	"	"	"					7	"	14	3					2	45	4	9	6	"	13	7					5	"	12	6
5	2	45	7	2	6	"	14	7					7	2	13	"					4	"	5	"	7	"	12	10					5	2	11	8
6	4	"	7	"	7	15	13	6					7	"	12	2					5	15	5	"	8	45	12	"					5	1	11	8
7	"	"	"	"	10	"	13	5					6	7	12	3					"	"	"	"	10	30	11	11					5	"	12	3
8	6	"	6	9	11	15	14	"					6	6	14	3					6	"	5	"	11	45	12	3					5	"	13	3
9	7	45	6	6	12	"	14	9					6	6	15	3					7	"	5	3	12	30	12	7					5	"	13	6
10	8	40	6	5	12	30	15	5					6	4	15	6					8	15	5	"	1	"	12	7					4	8	14	4
11	9	20	6	3	1	"	15	7					6	"	16	8					8	45	4	7	1	30	12	10					4	8	14	4
12	10	"	6	"	1	45	15	8					5	10	16	8					10	"	4	6	2	"	12	10					4	7	14	8
13	10	30	5	10	2	30	15	6					5	9	16	7					10	45	4	6	3	"	12	11					4	6	14	8
14	11	"	5	9	3	"	15	3					5	8	16	3					11	30	4	6	3	30	12	11					4	6	14	6
15	11	30	5	8	3	30	14	8					5	6	15	7					11	45	4	6	3	50	12	10					4	6	14	3
16	12	"	5	6	4	"	14	"					5	6	14	8					12	"	4	7	4	30	12	7					4	7	13	9
17	12	15	5	6	4	45	13	5					5	9	14	3					12	30	4	8	5	"	12	4					4	8	13	4
18	12	45	6	"	6	"	13	5					6	"	"	"					1	15	4	9	"	"	"	"					4	10	11	11
19	1	"	6	"	6	15	13	7					6	1	12	2					1	45	4	11	6	"	13	"					4	10	11	10
20	1	45	6	"	6	30	12	7					6	2	11	9					2	30	5	"	6	30	12	5					5	"	11	8
21	3	"	7	"	7	"	11	11					6	2	11	8					3	30	4	11	7	"	12	"					5	2	11	6
22	4	15	5	7	8	"	11	7					5	7	11	10					4	30	4	8	8	30	11	8					"	"	11	7
23	"	"	"	"	10	"	11	8					5	3	12	"					6	"	5	2	10	15	11	4					4	10	12	5
24	6	30	5	3	11	30	12	4					5	3	13	4					6	30	5	"	11	"	11	7					4	7	13	4
25	7	"	5	4	12	"	13	4					4	11	14	8					7	45	4	9	12	"	12	"					4	"	14	5
26	8	15	5	"	12	45	14	2					4	8	16	"					8	30	4	"	1	"	12	7					4	"	15	6
27	9	30	4	6	1	30	15	2					4	8	16	"					9	45	4	"	1	45	13	10					3	5	16	3
28	10	30	4	6	1	45	15	11					3	10	17	6					10	45	3	6	2	45	14	4					3	4	16	4
29	11	"	3	9	2	45	15	11					3	9	17	6					11	45	3	4	3	30	14	6					3	5	16	"
30	12	"	3	9	3	30	15	6					4	1	16	8					12	30	3	6	4	15	14	"					3	6	15	3
31																					1	15	3	6	5	"	13	"					3	6	14	3

Side Table of January and February 1819.

January 1819.-

Phases of the Moon,

First Quarter, . . . D^y H^y M^y
3rd 2nd 34th Afternoon

Full Moon, .. 11^h 5^m 30^s 20.

Last Quarter, .. 19.. 3.. 37.. 20..

New Moon, .. 26th 7th 4th Morning

Enters us ... 21st 1st 35 20.-

February. 1819.

Phases of the Moon,

First Quarter. $\overset{D}{2}$ $\overset{H}{7}$ $\overset{M}{18}$ Morning

Full Moon, . . . 10^h 0^m . The Afternoon,

Last Quarter, . . . 18" 3" 33" Morning

New Moon, . . . 24th 5th 4th Afternoon

Enters, &c. . . . 19th 4th 16th 20th—

Morning										Evening				Morning										Evening								
Date	Low Water				High Water				Hor. Partal	Bones	Low Water				High Water				Hor. Partal	Low Water	High Water				Hor. Partal	Bones						
	at		at		at		at				at		at		at		at				at											
	U.S.	M.S.	U.S.	M.S.	U.S.	M.S.	U.S.	M.S.			U.S.	M.S.	U.S.	M.S.	U.S.	M.S.	U.S.	M.S.			U.S.	M.S.										
1	1	45	3	9	"	"	"	"			3	10	13	"			2	45	3	6	6	"	12	6			3	8	11	8		
2	2	30	4	"	6	"	13	2			4	"	11	10			3	15	3	7	6	45	11	4			3	9	10	10		
3	3	15	4	2	6	45	12	2			4	"	11	3			3	30	3	10	8	"	10	2			4	"	10	4		
4	4	"	4	3	8	"	11	2			4	2	11	"			4	30	4	"	9	15	9	3			4	"	10	"		
5	4	45	4	6	8	45	10	9			4	8	11	"			"	"	"	"	11	"	9	"			4	"	10	6		
6	"	"	"	"	10	30	10	5			4	8	11	"			7	15	4	"	12	45	9	4			4	"	11	3		
7	6	30	4	10	12	"	10	1			4	2	11	3			8	30	3	11	2	"	10	3			3	11	12	"		
8	7	15	4	4	1	"	10	1			4	2	11	9			9	45	3	10	2	30	10	10			3	7	12	"		
9	9	"	4	2	2	"	10	8			4	1	12	8			10	30	3	5	3	"	11	4			3	"	14	"		
10	9	30	4	1	2	30	11	4			4	1	13	3			11	"	3	"	3	15	12	5			3	"	14	4		
11	10	30	4	1	3	"	11	8			3	11	13	8			11	30	2	10	3	30	13	2			2	11	14	8		
12	11	"	3	10	3	30	12	"			3	10	13	10			12	"	2	9	4	"	13	6			2	9	14	8		
13	12	"	3	8	4	"	11	10			3	6	13	7			12	35	2	9	4	15	13	9			2	9	14	8		
14	12	15	3	6	4	30	11	11			3	4	13	7			1	"	2	9	5	"	13	8			3	"	14	"		
15	1	"	3	4	5	"	12	"			3	6	13	3			1	30	3	1	5	30	13	4			3	"	13	4		
16	1	15	3	6	5	30	11	10			3	8	"	"			2	"	3	"	"	"	"	"			3	2	12	10		
17	2	"	3	8	6	"	12	7			3	8	11	8			2	45	3	3	6	"	12	7			3	5	11	8		
18	2	30	3	8	6	15	12	3			3	8	11	4			3	"	3	5	6	30	11	3			3	8	11	2		
19	3	"	3	9	6	30	11	7			3	10	11	"			4	15	3	8	7	"	10	6			3	10	10	8		
20	4	"	3	10	7	"	11	2			3	10	11	2			"	"	"	"	9	30	9	8			3	6	11	"		
21	5	"	4	"	8	30	10	10			4	"	11	"			7	"	3	10	12	"	10	"			3	6	12	"		
22	"	"	"	"	10	30	9	11			4	8	12	"			9	"	3	7	1	"	11	3			3	"	12	11		
23	6	"	4	"	12	15	11	"			3	8	13	2			10	"	2	8	2	"	13	6			3	6	13	6		
24	7	"	4	"	1	"	11	10			3	6	14	3			11	"	2	6	2	30	14	6			2	8	16	4		
25	9	"	3	6	2	"	12	11			3	6	15	6			11	45	2	7	3	"	16	"			2	4	17	"		
26	10	45	3	11	2	45	14	3			2	10	16	3			12	45	2	2	3	30	16	"			2	2	17	"		
27	11	45	2	7	3	30	14	7			2	8	16	4			1	"	2	"	4	15	15	7			2	4	15	10		
28	1	"	2	3	4	15	14	7			2	4	16	"			1	10	2	5	4	45	14	11			2	8	14	6		
29	1	15	3	4	5	15	14	3			3	"	14	7																		
30	1	45	3	1	5	30	13	7			3	1	13	7																		
31	2	15	3	4	"	"	"	"			3	6	13	7																		

Side Table of March and April 1819.

March 1819. —

Phases of the Moon.

First Quarter, .. 4th 2nd 25th Morning

Full Moon, . 12" 4" 56" 20"

Last Quarter, . . 19^u 16^u 35^u 20^u

New Moon, . . 26th 5th 18 20.

Enters γ , . . . 21" 4" 28. Afternoon

April 1819.

Phases of the Moon,

First Quarter, .. $\begin{matrix} D \\ 2 \end{matrix}$ $\begin{matrix} H \\ 10 \end{matrix}$ $\begin{matrix} M \\ 13 \end{matrix}$ at Night,

Full Moon, . . 10^h 6^m 59^h Evening,

Last Quarter, . . 17th . . 4th . . Live Afternoon,

• Kew & Moor, .. 24" 5" 43" 20

Enters 8, . . . 21. 4. 57. morning

Morning										Evening				Morning										Evening				Notes			
Date	Low Water		High Water		Hot: Parrel	Bored	Low Water	High Water	Hot: Parrel	Bored	Low Water		High Water		Hot: Parrel	Bored	Low Water		High Water		Hot: Parrel	Bored	Low Water	High Water	Hot: Parrel	Bored					
	at	at	at	at							at	at	at	at			at	at	at	at							at		at	at	at
	H.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	M.	S.	H.	M.	S.	M.		S.		
1	1	45	2	10	5	30	13	10			3	2	12	10			1	"	3	8	5	15	12	3			3	8	"	"	
2	2	"	3	5	6	"	12	6			3	6	"	"			1	5	3	7	5	30	11	3			4	"	11	1	
3	2	15	3	6	6	15	11	10			3	8	11	6			1	30	4	6	6	30	10	6			5	6	9	10	
4	2	30	3	10	6	45	10	7			4	"	10	11			3	40	6	"	8	30	9	4			"	"	10	6	
5	2	30	4	6	7	15	9	6			5	"	10	8			6	"	6	"	11	"	10	5			4	8	11	8	
6	5	"	5	"	9	45	9	8			"	"	10	8			7	30	4	8	12	"	11	"			4	"	12	6	
7	6	30	4	8	12	"	9	7			4	2	11	7			8	30	3	11	1	30	11	8			3	8	13	10	
8	8	15	4	2	1	30	10	6			4	"	12	5			9	"	3	8	1	45	13	6			3	6	14	4	
9	9	30	3	10	2	"	11	5			3	4	13	4			10	"	3	"	2	"	14	1			2	8	14	"	
10	10	"	3	2	2	15	12	6			3	"	14	4			10	30	2	8	2	15	15	6			2	8	15	8	
11	10	30	2	10	2	25	13	10			2	8	15	"			11	"	2	4	2	45	16	"			2	3	16	"	
12	11	15	2	6	2	40	14	10			2	4	15	8			11	30	2	3	3	"	16	7			2	3	16	3	
13	11	45	2	2	3	10	15	3			2	2	15	8			12	"	2	5	3	45	16	4			2	10	15	8	
14	12	30	2	2	3	45	15	5			2	4	15	8			12	30	3	"	4	15	16	1			3	4	15	"	
15	12	45	2	5	4	"	15	7			2	8	15	3			1	"	3	6	5	"	15	"			4	"	13	6	
16	1	"	2	8	4	30	15	3			2	10	14	3			1	30	4	1	6	"	14	"			4	5	"	"	
17	1	30	2	10	5	30	14	1			3	4	13	"			2	"	4	3	6	30	12	2			4	4	12	"	
18	1	45	3	4	5	45	13	3			3	11	"	"			3	"	4	6	7	"	11	"			4	5	11	4	
19	2	"	3	8	6	30	11	7			3	8	11	7			6	"	4	"	9	30	10	8			"	"	11	8	
20	2	45	3	10	8	"	10	4			4	"	10	7			7	"	3	7	11	45	11	8			3	4	13	"	
21	5	30	4	2	10	"	10	"			"	"	10	6			8	"	3	4	12	30	13	5			3	4	14	6	
22	6	45	4	3	12	"	10	7			3	8	11	8			9	"	3	5	1	"	15	3			3	"	15	10	
23	9	"	3	7	1	30	12	"			3	"	13	10			10	"	3	"	1	30	15	8			3	"	16	"	
24	10	"	2	8	1	45	13	10			2	8	15	8			10	15	2	10	2	"	16	8			2	10	16	3	
25	10	30	2	8	2	"	15	8			2	7	16	7			1	"	2	8	2	30	16	9			3	"	16	3	
26	11	"	2	6	2	25	16	8			2	6	17	"			11	15	3	"	2	45	16	9			3	4	15	6	
27	11	15	2	6	2	50	17	"			2	6	17	"			11	45	3	6	3	30	16	"			3	6	14	8	
28	12	"	2	6	3	15	16	6			2	8	16	2			12	"	3	7	4	"	15	3			3	8	13	8	
29	12	20	2	8	4	"	15	7			2	9	14	8			12	30	3	10	4	30	13	10			3	8	12	8	
30	12	45	2	9	4	15	14	7			3	5	13	8			12	45	3	10	5	30	12	11			3	10	11	6	
31	1	"	3	2	5	"	13	3			3	6	12	3																	

Tide Table of May and June 1819.

May 1819.

Phases of the Moon,

Phases of the Moon,			
First Quarter, ..	2 ⁿ	5 ⁿ	7 ⁿ Afternoon
Full Moon, ...	10 ⁿ	6 ⁿ	11 ⁿ Morning
Last Quarter, ...	16 ⁿ	10 ⁿ	11 ⁿ at Night
New Moon, ...	24 ⁿ	6 ⁿ	5 ⁿ Morning
Enters, II. ...	22 ⁿ	5 ⁿ	17 ⁿ Do.

June 1819.

Phases of the Moon.

	D	H	M.
First Quarter, ..	1 ⁿ	10 ⁿ	1 ⁿ Morning.
Full & Noon, ..	8 ⁿ	2 ⁿ	24 ⁿ Afternoon.
Last Quarter, ..	15 ⁿ	4 ⁿ	28 ⁿ Morning,
& New & Noon, ..	22 ⁿ	8 ⁿ	55 ⁿ Evening,
Enters $\overline{\text{D}}$, . . .	22 ⁿ	1 ⁿ	53 ⁿ Afternoon,

[illegible]

Tide Table of July and August 1819.

July 1819.

Phases of the Moon,

1	First Quarter	7 ^h	11 ^h	22 ^h Morning
2	Full Moon	7 ^h	9 ^h	14 ^h Night
3	Last Quarter	14 ^h	"	47 ^h Afternoon
4	New Moon	22 ^h	11 ^h	41 ^h Morning
5	First Quarter	30 ^h	"	2 ^h Afternoon
6	Enters γ	24 ^h	"	42 ^h Morning

August 1819.

Phases of the Moon.

Full Moon	6 ^h	3 ^h	51 ^h Morning
Last Quarter	13 ^h	"	7 ^h 30
New Moon	21 ^h	3 ^h	7 ^h 30
First Quarter	24 ^h	9 ^h	21 ^h at night
Enters μ	24 ^h	7 ^h	9 ^h Morning

Days	Morning								Evening							
	Low Water				High Water				Low Water				High Water			
	at Ebb				at Flood				at Ebb				at Flood			
	H.	M.	S.	P.	H.	M.	S.	P.	H.	M.	S.	P.	H.	M.	S.	P.
1	3	"	6	7	7	15	12	6	6	"	13	3	4	45	6	11
2	4	"	6	"	8	15	12	3	6	"	13	2	6	"	6	10
3	5	45	6	1	9	45	13	1	"	"	13	3	6	45	6	4
4	6	"	5	10	11	"	13	9	6	4	13	10	8	15	6	2
5	7	"	6	3	12	"	15	3	6	4	15	3	9	45	5	10
6	8	"	6	"	1	"	17	"	6	"	17	"	10	45	5	4
7	9	30	5	10	1	30	18	2	6	"	18	2	11	30	5	2
8	10	30	5	8	2	"	18	7	6	"	17	6	12	"	5	"
9	11	15	5	"	2	45	18	4	5	4	17	"	12	45	5	"
10	12	5	5	"	4	"	18	"	5	8	16	6	1	30	5	6
11	1	"	5	4	5	"	17	6	6	2	17	4	1	45	6	2
12	1	15	6	"	5	30	17	4	6	2	"	"	2	"	6	6
13	2	"	6	"	6	"	15	8	6	7	16	"	2	30	7	6
14	2	30	6	7	6	30	15	4	6	6	15	"	3	15	7	8
15	3	15	7	2	7	15	14	4	7	3	14	6	5	30	8	"
16	4	30	7	8	8	30	14	2	7	8	14	5	"	"	"	"
17	5	30	8	"	10	"	14	4	"	"	14	2	6	45	7	6
18	6	"	7	2	11	15	14	5	7	"	14	5	8	"	7	2
19	7	"	6	10	12	30	14	6	6	6	14	6	9	"	6	10
20	8	15	6	4	1	15	15	3	6	8	14	6	9	45	6	3
21	9	"	6	"	1	45	16	1	6	6	15	3	10	30	6	2
22	10	"	6	"	2	30	16	8	7	"	16	"	11	"	6	"
23	10	30	6	10	2	45	17	8	7	"	16	8	11	30	5	10
24	11	"	6	8	3	"	17	4	7	"	16	3	12	"	6	"
25	11	45	6	4	3	45	16	9	7	"	15	10	12	30	6	4
26	12	15	6	3	4	"	16	7	6	6	15	8	1	"	6	6
27	1	"	6	"	5	"	15	10	6	10	15	6	1	30	7	"
28	1	15	6	5	5	30	16	"	7	"	"	"	2	"	7	6
29	2	"	6	8	6	"	15	3	6	10	15	4	2	30	8	"
30	2	30	7	"	6	30	14	6	7	2	14	4	4	"	9	6
31	3	"	7	"	7	15	14	2	7	4	13	10	"	"	"	"

Midday on
Heavy
so
Midday

Small on
Midday
Heavy

Tide Table of September and October 1819.

September 1819.

Full Moon, . . . 4^h 11^m 34 Morning
 Last Quarter, . . 11^h 2^m 52 Afternoon
 New Moon, . . . 19^h 6^m 46 Evening
 First Quarter, . . 27^h 4^m 53 Morning
 Enters m, . . . 24^h 3^m 50

October 1819.

Phases of the Moon,
 Full Moon, . . . 3^h 9^m 28 Evening
 Last Quarter, . . 11^h 8^m 51 Morning
 New Moon, . . . 19^h 9^m 51 Evening
 First Quarter, . . 26^h 11^m 50 Morning
 Enters m, . . . 24^h 3^m 50 Afternoon

Date	Morning							Evening							Morning							Evening													
	Low Water			High Water			Hor =	Low Water			High Water			Hor =	Low Water			High Water			Hor =	Low Water			High Water			Hor =	Bored						
	at 6 ^h 10 ^m			at 12 ^h 10 ^m			at Noon	at 6 ^h 10 ^m			at 12 ^h 10 ^m			at Midnight	at 6 ^h 10 ^m			at 12 ^h 10 ^m			at Noon	at 6 ^h 10 ^m			at 12 ^h 10 ^m			at Midnight							
	H.	M.	S.	H.	M.	S.	M.S.	H.	M.	S.	H.	M.	S.	M.S.	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.	M.S.	H.	M.	S.	M.S.				
1	6	30	8	6	11	30	17 8				8	4	17	8				8	45	10	4	12	"	20	7				10	4	20	7			
2	7	30	8	"	12	30	19 5				8	"	19	6				9	45	10	2	12	30	21	9				10	4	20	10			
3	9	30	7	8	1	15	20 7				7	10	20	7				mid. B.	10	30	10	4	1	"	22	1				10	4	22	"		Heavy B.
4	10	30	7	6	1	45	21 3				7	10	21	3				Heavy "	"	"	10	5	1	45	22	1				10	5	22	"		se - "
5	11	"	7	9	2	"	21 6				7	8	21	6				se "	11	30	10	5	2	15	21	8				10	6	21	8		mid. B. "
6	11	45	7	10	3	"	21 6				8	"	21	4				se "	11	45	10	6	2	45	21	4				10	6	21	4		Light "
7	12	30	7	10	3	30	21 "				8	2	20	10				mid. B.	12	30	10	7	3	30	20	9				10	7	20	9		se "
8	12	45	8	2	4	"	20 3				8	"	20	"				Light "	12	45	10	7	4	"	19	4				10	7	19	6		
9	1	15	8	6	4	30	19 8				9	"	19	8					1	15	10	7	4	45	17	10				11	"	18	"		
10	1	30	8	10	5	"	18 5				9	10	18	5					1	30	11	1	5	15	16	2				11	6	16	6		
11	1	40	10	"	5	30	16 8				10	6	16	8					2	"	11	7	"	"	"	"				11	7	14	5		
12	2	"	10	10	6	"	14 3				11	10	14	5					4	"	12	2	6	30	14	7				12	3	13	8		
13	4	"	12	"	6	30	14 3				11	10	13	6					"	"	"	"	9	15	14	10				11	8	15	3		
14	"	"	"	"	10	"	14 8				11	2	14	8					6	30	11	4	11	30	15	7				10	6	15	2		
15	7	30	10	"	12	"	16 8				10	"	16	8					7	30	10	4	12	"	16	8				10	"	17	10		
16	8	45	9	5	12	45	18 "				8	10	18	"					8	30	9	10	12	30	18	7				9	10	18	8		
17	9	30	8	6	1	15	19 3				8	6	19	3					9	"	9	10	1	"	19	8				9	6	20	5		
18	10	"	8	3	1	30	19 10				8	4	19	10					9	30	9	6	1	30	20	7				9	6	20	9		
19	10	30	8	2	1	45	20 4				8	4	20	4				Light B.	10	"	9	6	1	45	20	7				9	6	20	7		
20	11	"	8	6	2	15	20 7				8	6	20	9				mid. B.	11	"	9	4	2	15	20	7				9	6	20	10		
21	11	30	8	6	2	30	20 9				8	8	20	9				se "	11	30	9	4	2	45	20	4				9	5	20	8		Small B.
22	12	"	8	9	3	"	20 9				8	10	20	9				se "	12	"	9	4	3	6	20	2				9	5	20	5		
23	12	30	8	10	3	45	20 4				9	4	20	6				Light "	12	45	9	4	4	"	19	3				9	6	19	10		
24	1	"	9	2	4	"	20 2				9	6	20	2					1	15	9	8	4	30	18	2				9	10	18	6		
25	1	15	9	10	5	15	19 6				10	"	19	6					1	45	9	10	"	"	"	"				9	6	17	"		
26	1	30	10	2	5	30	18 "				11	"	18	6					2	45	9	8	6	"	17	"				9	8	14	10		
27	2	30	11	"	"	"	"				11	3	16	7					4	"	9	4	7	30	15	2				9	4	15	"		
28	4	"	11	6	6	30	16 7				11	6	16	10					"	"	"	"	9	30	15	8				8	5	15	10		
29	"	"	"	"	10	"	16 10				11	"	16	10					6	30	8	4	11	"	17	"				7	10	17	5		
30	7	"	10	7	11	"	18 10				10	4	18	10					8	"	7	10	12	"	17	10				7	4	18	5		
31																			9	"	7	3	12	45	18	3				7	"	18	10		

Heavy B.

se "

mid. B.

Light "

se "

Light B.

mid. B.

se "

Light "

se "

Light B.

mid. B.

se "

Light "

se "

Light B.

mid. B.

se "

Light "

Tide Table of November and December, 1819.

November 1819.

Phases of the Moon.

Full Moon, D. H. M.
2. 9. 26. Morning,

Last Quarter, . . 10ⁿ 5ⁿ 13ⁿ 2ⁿ

New Moon, . 17ⁿ 11ⁿ 35ⁿ at Night,

First Quarter, .. 24th 6th 59th Evening,

Enters, ↑ . . 23 8^h 30^a Morning

December 1819.

Phases of the Moon,

Full Moon, ... 1st D. H. M. 5th Afternoon,

Last Quarter, 10, 2, 23 Morning,

New Moon, .. 17th 11th 47 at Night

First Quarter, . 24ⁿ 3ⁿ 38ⁿ - Morning

Full Moon, - 3 $\frac{1}{2}$ by 10. Evening

Butlers W. 22" 8" 59" 20

Morning										Evening				Morning										Evening			
Low Water		High Water		Hor. Parrel		Low Water		High Water		Hor. Parrel		Bore		Low Water		High Water		Hor. Parrel		Low Water		High Water		Hor. Parrel		Bore	
at Ebbed		at Flood		Noon		Ebbed		Flood		Midnight				at Ebbed		at Flood		Noon		Ebbed		Flood		Midnight			
Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.
1	9	45	7	"	1	30	18	4						10	"	5	"	2	"	13	9						
2	10	15	6	9	2	"	18	3						10	45	4	8	2	30	14	"						
3	11	"	6	8	2	15	17	11						11	30	4	8	3	30	13	10						
4	1	30	6	6	2	45	17	2						11	45	5	"	4	"	13	6						
5	2	"	6	6	3	45	16	3						12	"	5	2	4	30	13	"						
6	2	45	6	6	4	30	15	3						12	30	5	4	5	30	12	6						
7	1	"	6	8	5	"	14	3						1	15	5	3	"	"	"	"						
8	1	15	6	8	"	"	"	"						1	45	5	2	6	"	12	10						
9	1	30	7	"	6	"	13	6						2	30	5	2	6	30	12	2						
10	2	30	7	"	6	30	12	3						3	"	5	"	7	"	11	4						
11	4	30	6	8	8	30	11	6						4	30	5	"	8	30	11	"						
12	"	"	"	"	10	"	12	7						"	"	"	"	9	45	11	"						
13	6	15	7	"	11	15	13	8						6	"	5	"	11	"	11	2						
14	7	15	6	8	12	"	14	3						7	"	4	9	12	"	11	8						
15	8	15	6	6	12	30	15	3						8	15	4	6	1	"	12	2						
16	9	"	6	"	1	"	15	8						9	30	4	6	1	30	13	3						
17	9	15	5	8	1	45	16	3						10	15	4	"	2	"	13	8						
18	10	15	4	11	2	"	16	4						11	"	3	10	3	"	14	"						
19	11	30	5	"	3	"	16	4						12	"	3	10	3	30	14	"						
20	11	45	5	1	3	45	15	9						12	30	3	10	4	30	13	8						
21	12	30	5	4	4	30	15	4						1	30	4	"	5	30	13	"						
22	1	"	5	9	5	"	14	7						2	15	4	"	"	"	"	"						
23	1	45	6	"	"	"	"	"						3	"	4	"	6	30	12	10						
24	3	"	6	3	6	30	14	6						3	45	4	1	7	15	12	"						
25	4	15	6	4	7	30	13	10						5	"	4	1	8	45	11	5						
26	"	"	"	"	9	"	13	8						"	"	"	"	10	"	10	8						
27	6	"	6	2	10	45	13	8						6	30	4	"	11	"	10	8						
28	7	15	5	10	11	45	13	8						7	30	4	"	12	30	10	4						
29	8	"	5	6	1	"	14	"						9	"	4	"	1	30	10	10						
30	9	15	5	3	1	30	14	3						9	45	4	"	2	"	11	5						
31														10	30	4	"	2	45	11	10						

Tide Table of January and February 1820.

January 1820.

Phases of the Moon,

Last Quarter, . . . 8^h 10^m 16^s Afternoon
 New Moon, . . . 15^h 10^m 47^s do
 First Quarter, . . . 22^h 2^m 36^s do
 Full Moon, . . . 30^h 4^m 39^s Morning
 Enters, . . . 21^h 0^m 0^s —

February 1820.

Phases of the Moon,

Last Quarter, . . . 7^h 3^m 8^s Afternoon
 New Moon, . . . 14^h 9^m 10^s Morning
 First Quarter, . . . 21^h 4^m 8^s do
 Full Moon, . . . 29^h 6^m 48^s do
 Enters, . . . 19^h 0^m 0^s —

Morning,										Evening																		
Low Water				High Water				Hor. Par. =		Low Water				High Water				Hor. Par. =										
at Ebb				at Flood				at Noon		at Ebb				at Flood				at Noon										
at	Ebb	at	Flood	at	Ebb	at	Flood	at	noon	at	Ebb	at	Flood	at	Ebb	at	Flood	at	noon									
h.	m.	s.	h.	m.	s.	h.	m.	s.	M.S.	h.	m.	s.	h.	m.	s.	h.	m.	s.	M.S.									
1	11	3	11	3	25	12	1			3	10	13	9			12	3	4	4	13	3	3	4	14	4			
2	11	35	3	9	4	12	1			3	10	13	6			12	30	3	4	4	20	13	4	3	4	14	1	
3	12	15	3	9	4	30	12	1		3	10	13	3			1	3	4	5	13	4	3	4	13	6			
4	12	45	3	10	4	45	11	7		3	10	12	12			1	20	3	4	5	15	12	4	3	4	12	8	
5	1	15	3	11	5	30	11	6		3	10	12	8			2	3	4	5	45	12	3	4	11	7			
6	1	40	3	10						3	10	11				2	30	3	4	6	12	3	4	11	7			
7	2	15	3	10	5	45	11	6		3	10	10	4			2	45	3	4	6	30	11	3	3	4	11		
8	2	45	3	10	6	30	11	2		3	10	10	2			3	30	3	4	7	15	10	6	3	4	10	6	
9	3	30	3	10	7		11			3	10	10	2			4	15	3	7	8	30	9	9	3	7	10	6	
10	4	15	4		8	15	10	10		4		11								10	45	9	8	4	3	11	1	
11					9	45	10	7		4	7	11	6			7		4	2	12	30	10	3	3	8	12	5	
12	7		4	6	11	30	10	8		4	6	12				8	45	3	7	1	30	11	5	3	2	14	6	
13	8		4	5	12	15	10	11		4	4	13				10		3		2	13	6	2	10	15	9		
14	9	15	4	2	1	30	11	7		4		14	6			11		2	6	2	30	15		2	4	17		
15	10		3	8	2		13	2		3	2	15	8			12		2		3	16	3	2		17	5	Small boat	
16	10	45	3		2	45	14			2	9	16	6	Light breeze in night		12	15	1	10	4	16	6	1	10	17		See See	
17	12		2	7	3	30	14	9		2	6	16	6	do		12	45	1	10	4	45	16	2	1	10	15	10	do do
18	12	45	2	5	4	15	14	11		2	6	16	1	do		1	30	1	10	5	15	15		2	4	14	5	do do
19	1	30	2	5	5	15	14	8		2	7	15	3			2		2	4	5	30	13	11	2	10			
20	2		2	8						2	9	14	1			2	30	2	10	6	13		2	10	12	4		
21	2	45	3	2	6		14			3	8	13	2			2	50	3		6	45	11	5	3	6	11		
22	3		3	9	6	45	12	8		4	2	12	2			3	10	3	7	7	15	10	3	4		10	3	
23	3	30	4		7	30	11	7		4	3	11	7			4		4	2	8	45	9	3			9	6	
24	4	20	4	2	8	45	10	7		4	5	11				7		3	10	12		8	6	3	10	10	3	
25					10	30	10	2		4	4	11	3			8	30	3	9	1		9	6	3	6	11	10	
26	7		4	6	12		10	3		4	3	12				9	30	3	2	2		10	10	3	2	13		
27	8	30	4	3	1	15	10	11		4	2	12	7			10	30	3		2	30	11	7	2	10	13	8	
28	9	30	4	2	1	50	11	1		3	10	13	2			11		2	8	3		12	8	2	6	14	5	
29	10	30	3	8	2	15	11	10		3	7	13	10			11	30	2	4	3	6	13	8	2	4	14	10	
30	11		3	5	3	10	12	3		3	4	14	1															
31	11	30	3		3	30	12	10		3	4	14	3															

Light = Day
in Night

Small Row
Low Low
do do
do do

Side Table of March and April 1820.

March 1820.

Phases of the Moon.

Last Quarter, . . . $\overset{D}{8}^n$ $\overset{H}{4}^n$ $\overset{M}{\text{Line Morning}}$

New Moon, . . . 14th 7th 15th Afternoon

First Quarter, . . . 21, 7" 55" 20-

Full & Moon, . . . 30th 0th 40th Morning

Enters $r_1, \dots, 20_n, 0_n, 0-$

April 1820.

Phases of the Moon,

Last Quarter, .. $\overset{D}{C}^n$ $\overset{H}{1}^n$ $\overset{M}{18}^n$ Afternoon,

New Moon, 13ⁿ 5ⁿ 8ⁿ Morning,

First Quarter, - 20th 1st 16th Afternoon,

Full Moon, - 28th 3rd 49th Afternoon,

Enter $\delta_1, \dots, 20, 0, 0, \dots$

Morning										Evening										Morning										Evening									
Low Water		High Water		Hour	Barrel	Low Water		High Water		Hour	Barrel	Low Water		High Water		Hour	Barrel	Low Water		High Water		Hour	Barrel	Low Water		High Water		Hour	Barrel										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6										
at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at 6	at																				

Tide Table of May and June 1820.

May 1820.

Phases of the Moon,

Last Quarter, ... 3^h 7^m 44^s Afternoon
 New Moon, ... 12^h 3^m 3^s A.M.
 First Quarter, ... 20^h 7^m 16^s Morning
 Full Moon, ... 28^h 3^m 43^s A.M.
 Enters II. ... 21^h 0^m 0^s

June 1820.

Phases of the Moon,

Last Quarter, ... 4^h 1^m 40^s Morning,
 New Moon, ... 11^h 1^m 34^s Morning,
 First Quarter, ... 19^h " 56^s Morning,
 Full Moon, ... 26^h " 58^s Afternoon,
 Enters, ... 21^h " "

Morning												Evening											
Low Water				High Water				Hor. Parrel				Low Water				High Water				Hor. Parrel			
at Elbe				at Elbe				at Elbe				at Elbe				at Elbe				at Elbe			
Hr. M. S.				Hr. M. S.				Hr. M. S.				Hr. M. S.				Hr. M. S.				Hr. M. S.			
1	12	"	3	3	45	16	5					3	4	15	3								
2	12	30	3	4	15	15	9					4	"	13	7								
3	1	"	3	7	5	14	7					4	"	"	"								
4	2	"	3	4	6	"	12	6				4	"	12	6								
5	2	30	3	8	6	45	11	6				4	"	12	7								
6	3	30	3	10	8	30	11	3				4	2	12	7								
7	5	45	3	10	10	"	11	3				"	"	12	10								
8	7	"	3	8	11	"	12	4				3	8	14	"								
9	7	45	3	7	11	50	14	10				3	5	15	6								
10	8	30	3	3	12	15	16	7				3	"	16	7								
11	9	15	3	"	12	50	17	6				3	2	17	8								
12	10	"	3	8	1	45	17	9				3	6	17	8								
13	10	30	3	4	2	"	17	9				3	7	17	6								
14	11	15	3	8	2	45	17	"				3	8	16	6								
15	11	45	3	9	3	35	15	6				3	8	14	6								
16	12	"	3	9	4	30	15	"				3	9	13	3								
17	12	30	3	11	5	"	14	2				4	"	12	8								
18	12	50	4	3	5	45	13	7				4	6	"	"								
19	1	"	4	5	6	"	11	5				4	8	12	8								
20	2	15	4	10	7	15	11	1				5	4	12	3								
21	3	45	5	6	8	50	11	3				5	4	12	7								
22	5	45	5	6	10	45	11	9				"	"	12	4								
23	6	30	5	6	11	30	12	3				5	6	13	"								
24	7	15	4	10	12	"	13	4				4	6	13	6								
25	8	"	4	3	12	30	14	4				4	2	14	"								
26	9	"	4	1	1	15	15	4				4	6	15	"								
27	10	"	4	2	2	"	16	2				4	1	15	2								
28	10	30	3	9	2	20	16	6				4	2	15	8								
29	11	"	3	8	2	45	16	9				4	6	15	6								
30	11	30	3	8	3	30	16	9				4	6	15	6								
1	12	10	3	10	4	"	16	6				4	4	14	10								

Tide Table of July and August 1820.—

July 1820. —

Phases of the Moon,

	D.	H.	M.
C Last Quarter, ...	3 ^o	5 ^h	7 ^h Morning,
☉ New Moon, ...	10 ^o	1 ^h	20 ^h Afternoon,
☾ First Quarter, ...	18 ^o	5 ^h	18 ^h Afternoon,
☾ Full Moon, ...	25 ^o	8 ^h	47 ^h Afternoon,
☉ Enters A. Lo. ...	22 ^o	0	0 -

August 1820. —

Phases of the Moon.—

	D	H	M.
(Last Quarter,	1 ⁿ	1 ⁿ	43. Morning,
⊕ New Moon,	9 ⁿ	3 ⁿ	35. Morning,
) First Quarter,	17 ⁿ	7 ⁿ	47. Morning,
○ Full Moon,	24 ⁿ	4 ⁿ	24. Morning,
(Last Quarter,	30 ⁿ	8 ⁿ	32. Afternoon,
○ Enters n ^y Virgo	23 ⁿ	0 ⁿ	0 ⁿ

Date	Morning										Evening										Notes							
	Low Water					High Water					Moon	Low Water					High Water					Moon						
	at Ebbed to					at Flooded to						Low Water					at Flooded to											
	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.		hr.	min.	hr.	min.	hr.	min.	hr.	min.									
	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.
1	1	45	5	"	6	"	15	4					5	6	"	"												
2	2	15	5	4	6	30	16	"					6	4	16	"												
3	3	"	6	"	7	30	15	4					6	6	15	10												
4	3	45	6	8	8	"	15	"					6	10	15	10												
5	5	30	7	"	9	15	15	"					"	"	15	8												
6	6	"	6	8	10	40	15	6					6	10	15	8												
7	7	"	6	6	12	"	15	8					6	8	15													
8	8	15	6	6	1	"	16	"					6	8	15	8												
9	9	15	6	6	1	40	16	10					7	"	16	"												
10	10	"	6	10	2	15	17	6					7	"	16	10												
11	11	"	6	8	2	45	17	9					6	8	16	8												
12	11	30	6	6	3	30	17	8					6	10	16	4												
13	12	"	6	4	4	"	17	4					6	8	16	"												
14	12	30	6	2	4	30	17	2					7	"	16	"												
15	1	15	7	"	5	"	17	"					7	6	16	"												
16	1	45	7	2	5	45	16	8					7	6	"	"												
17	2	"	7	4	6	"	16	"					7	9	16	8												
18	2	30	8	"	6	30	16	"					8	7	16	"												
19	2	50	8	4	6	45	15	6					8	6	15	3												
20	4	10	8	10	7	30	15	3					8	10	15	3												
21	6	"	8	4	9	"	15	3					8	6	15	6												
22	6	15	8	2	11	"	16	"					8	"	16	"												
23	7	30	7	10	12	"	17	6					7	8	17	"												
24	8	45	7	6	12	45	18	8					7	8	17	"												
25	10	"	7	6	1	40	20	2					8	"	19	10												
26	10	30	7	10	2	15	20	7					8	"	20	3												
27	11	30	7	8	2	50	20	10					7	10	20	3												
28	12	"	7	8	3	45	20	10					8	2	20	"												
29	12	45	7	9	4	15	20	4					8	2	20	"												
30	1	30	7	10	5	"	20	3					8	2	19	3												
31	2	"	8	"	5	45	18	9					8	5	"	"												

Side Table of September and October 1820.

September 1820. —

Phases of the Moon,

⊕ New Moon, . . . 7 ^h	7 ^h	46 ^m & Afternoon
) First Quarter, . . . 15 ^h	1 ^h	13 ^m & Afternoon
○ Full Moon, . . . 22 ^h	0 ^h	42 ^m & Afternoon
(Last Quarter, . . . 29 ^h	8 ^h	56 ^m & Morning
⊙ Enters <u>Libra</u> 23 ^h	0	0 —

October 1820.

Phases of the Moon.

⊕ New Moon,	7 _n	1 _n	8 _n Afternoon
☾ First Quarter,	15 _n	6 _n	16 _n Morning,
☉ Full Moon,	21 _n	10 _n	10 _n Afternoon,
☾ Last Quarter,	29 _n	1 _n	21 _n Morning
⊙ Enters ♍ Scorpio	23 _n	0 _n	0 _n —

Morning										Evening				Morning										Evening			
Low Water		High Water		Hor. Parrel	Low Water		High Water		Hor. Parrel	Bones	Low Water		High Water		Hor. Parrel	Low Water		High Water		Hor. Parrel	Bones						
at	Elp'd	at	Elp'd	at	at	Elp'd	at	Elp'd	at	at	at	at	Elp'd	at	Elp'd	at	at	Elp'd	at	Elp'd	at	at					
Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.	Hr.	M.				
1	3	45	11	6	7	"	15	7	"	11	6	15	"	"	"	"	9	"	13	"	9	4	13	2			
2	"	"	"	"	8	45	14	10	"	11	3	16	"	7	"	8	10	11	30	14	3	8	4	14	4		
3	7	"	10	8	11	"	17	"	"	10	4	17	"	8	"	8	2	12	20	15	8	7	10	16	"		
4	8	"	10	2	12	30	18	5	"	10	2	18	4	9	"	7	8	12	45	17	"	7	8	16	6		
5	9	15	9	8	12	40	19	4	"	9	8	19	2	9	20	7	6	1	10	17	10	8	4	18	"		
6	10	"	9	6	1	30	19	10	"	9	4	19	10	9	45	8	2	1	30	18	9	8	6	18	9		
7	10	30	9	2	1	50	20	4	"	9	6	20	4	10	30	7	9	1	55	18	5	7	6	18	6		
8	11	"	9	2	2	10	20	4	"	9	6	20	4	10	45	7	6	2	20	18	7	7	6	18	8		
9	11	30	9	3	2	25	20	6	"	9	8	20	6	11	"	7	6	2	50	18	7	7	6	18	8		
10	11	50	9	4	2	45	20	6	"	9	6	20	6	11	30	7	6	3	"	18	5	7	6	18	8		
11	12	20	9	3	3	15	20	1	"	9	6	20	3	12	"	7	6	3	30	18	"	7	8	17	6		
12	12	45	9	4	3	15	19	7	"	9	3	19	7	12	20	7	8	4	10	17	2	7	8	17	3		
13	1	"	9	3	4	30	18	8	"	9	3	18	8	1	"	7	8	4	45	16	3	7	10	16	4		
14	1	20	9	3	5	"	17	8	"	9	8	17	8	1	45	8	"	5	45	15	2	8	2	"	"		
15	1	45	9	8	5	30	16	4	"	10	3	"	"	3	"	8	2	6	15	15	2	8	4	13	8		
16	2	10	10	"	6	"	16	2	"	10	3	14	5	4	15	8	7	7	30	14	"	8	7	13	8		
17	3	45	10	5	7	45	14	7	"	10	6	14	"	"	"	"	"	8	30	14	8	7	6	15	"		
18	"	"	"	"	10	30	14	8	"	10	"	15	"	6	45	7	6	11	30	16	3	7	6	17	"		
19	7	30	9	6	11	45	17	9	"	9	"	17	9	8	"	7	6	12	5	17	4	6	11	17	6		
20	8	30	8	6	12	20	19	3	"	9	"	19	3	9	15	6	9	12	48	17	4	6	6	18	6		
21	9	45	8	6	1	"	20	2	"	9	6	20	2	10	"	6	5	1	12	18	6	6	4	19	"		
22	10	30	8	6	1	30	20	8	"	9	"	20	9	10	45	6	4	1	45	18	6	6	4	18	9		
23	11	"	8	4	2	30	21	"	"	9	"	21	"	11	15	6	4	2	40	18	"	6	4	18	4		
24	11	45	8	6	2	45	21	"	"	9	8	20	10	12	6	6	4	3	30	17	3	6	3	17	7		
25	12	15	9	4	3	15	20	9	"	9	6	20	9	12	20	6	3	4	10	16	3	6	4	16	6		
26	12	30	9	5	4	"	20	7	"	9	4	20	7	12	45	6	5	4	40	15	2	6	6	15	6		
27	1	"	8	10	4	25	18	3	"	9	6	18	3	1	10	6	8	5	20	13	4	7	"	14	2		
28	1	30	9	"	5	"	16	5	"	9	6	16	5	1	55	7	"	"	"	"	"	7	2	12	6		
29	1	45	9	4	6	"	14	"	"	10	"	"	"	3	15	7	2	6	30	12	9	7	4	11	7		
30	3	20	10	"	6	30	14	"	"	10	"	12	10	5	"	6	8	8	20	12	1	6	8	11	8		
31														"	"	"	"	10	30	12	3	6	4	12	8		

Tide Table of November and December 1820.

November, 1820.

Phases of the Moon,

☉ New Moon, .. 6^h 6^m 7^h Morning,
 ☾ First Quarter, .. 13^h 3^m 50^m Afternoon,
 ☀ Full Moon, .. 20^h 9^m 8^m Morning,
 ☾ Last Quarter, .. 27^h 9^m 18^m Afternoon,
 ☉ Enters ♍ Sagittarius, 22^h 0^m 0^m

December, 1820.

Phases of the Moon,

☉ New Moon, .. 5^h 10^m 5^m Afternoon,
 ☾ First Quarter, .. 12^h 11^m 59^m Afternoon,
 ☀ Full Moon, .. 19^h 10^m 59^m Afternoon,
 ☾ Last Quarter, .. 27^h 7^m 10^m Afternoon,
 ☉ Enters ♐ Capricornus, 22^h 0^m 0^m

Morning										Evening						Morning										Evening					
Low Water		High Water		Hor. Paral		Low Water		High Water		Hor. Paral		Bored		Low Water		High Water		Hor. Paral		Low Water		High Water		Hor. Paral		Bored					
at Ebb		at Flood		at Noon		at Ebb		at Flood		at Midnight				at Ebb		at Flood		at Noon		at Ebb		at Flood		at Midnight							
H. M. S.		H. M. S.		M. S.		H. M. S.		H. M. S.		M. S.				H. M. S.		H. M. S.		M. S.		H. M. S.		H. M. S.		M. S.							
1	7	"	6	6	11	15	13	"						6	2	13	8														
2	8	"	6	4	12	30	13	6						5	9	14	4														
3	8	40	5	10	1	"	14	3						5	8	15	"														
4	9	20	5	9	1	25	14	7						5	6	15	10														
5	9	50	5	6	2	"	15	2						5	4	16	6														
6	10	35	5	4	2	20	15	5						5	4	16	8														
7	11	10	5	4	2	40	15	5						5	3	16	8														
8	11	30	5	4	3	20	15	2						5	3	16	2														
9	12	"	5	4	4	"	15	"						5	6	15	9														
10	12	35	5	7	4	30	14	2						5	7	14	10														
11	1	20	5	7	5	"	13	2						5	7	13	8														
12	1	50	5	7	"	"	"	"						5	8	12	4														
13	2	50	5	8	6	45	13	"						5	7	12	"														
14	4	"	5	8	8	10	12	8						5	8	12	"														
15	"	"	"	"	9	45	12	8						5	2	12	6														
16	6	30	5	3	11	"	13	2						5	"	13	6														
17	8	"	5	"	12	"	13	8						5	"	14	8														
18	8	50	5	"	12	48	14	7						4	6	16	2														
19	9	45	4	8	1	20	15	3						4	4	16	10														
20	10	15	4	6	2	"	15	4						4	5	16	10														
21	11	"	4	6	2	45	15	4						4	8	16	4														
22	11	45	4	9	3	20	14	8						4	7	16	10														
23	12	"	4	9	3	50	14	2						4	10	14	7														
24	12	50	4	10	4	30	13	3						4	10	13	8														
25	1	20	4	11	5	30	12	3						5	"	12	6														
26	2	"	5	"	"	"	"	"						5	"	11	7														
27	2	40	5	"	6	"	12	"						5	"	11	3														
28	3	30	5	"	7	45	11	3						5	2	11	"														
29	"	"	"	"	9	"	10	10						5	"	11	"														
30	6	15	4	10	10	30	10	10						4	8	11	4														
31																															

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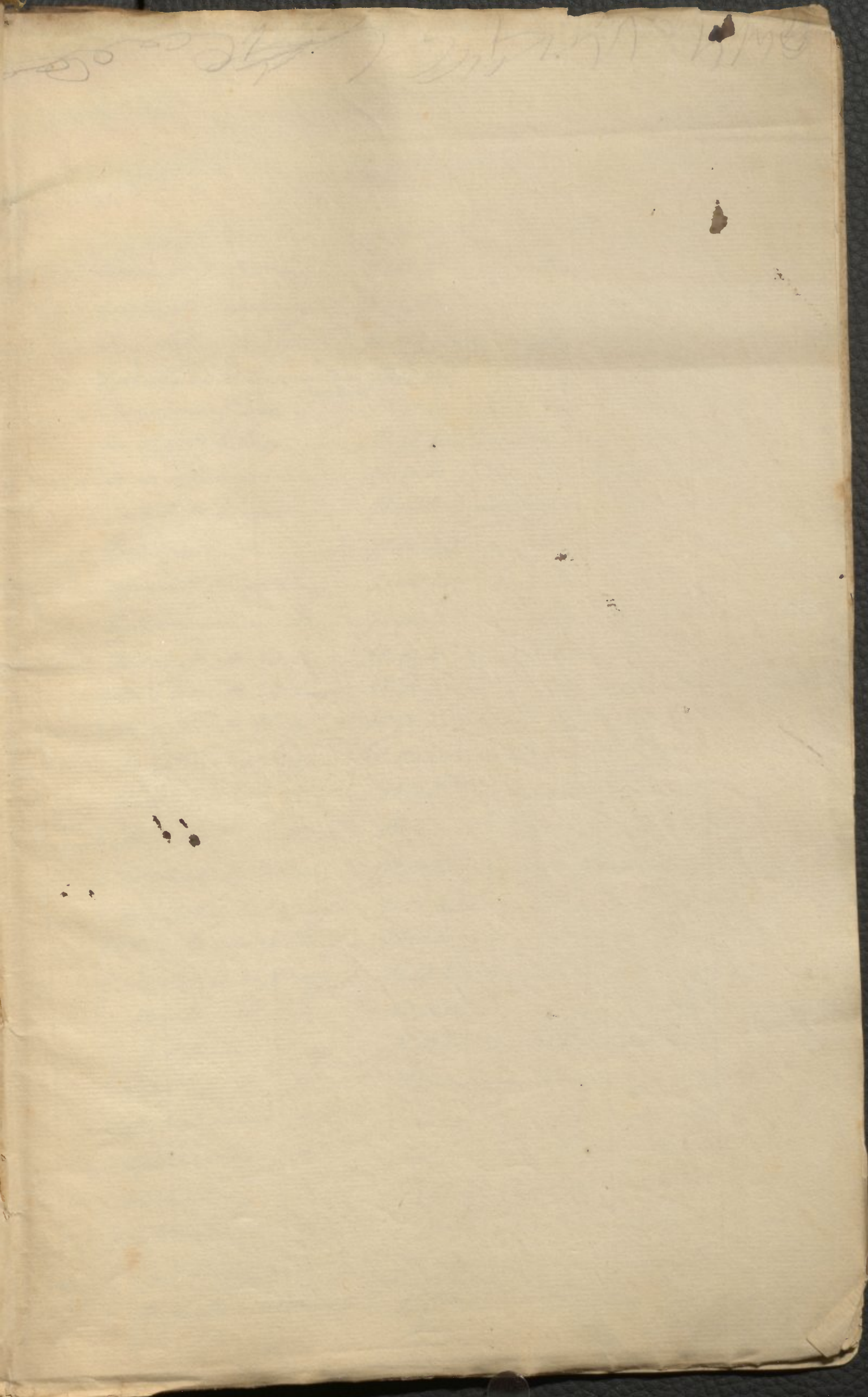
38

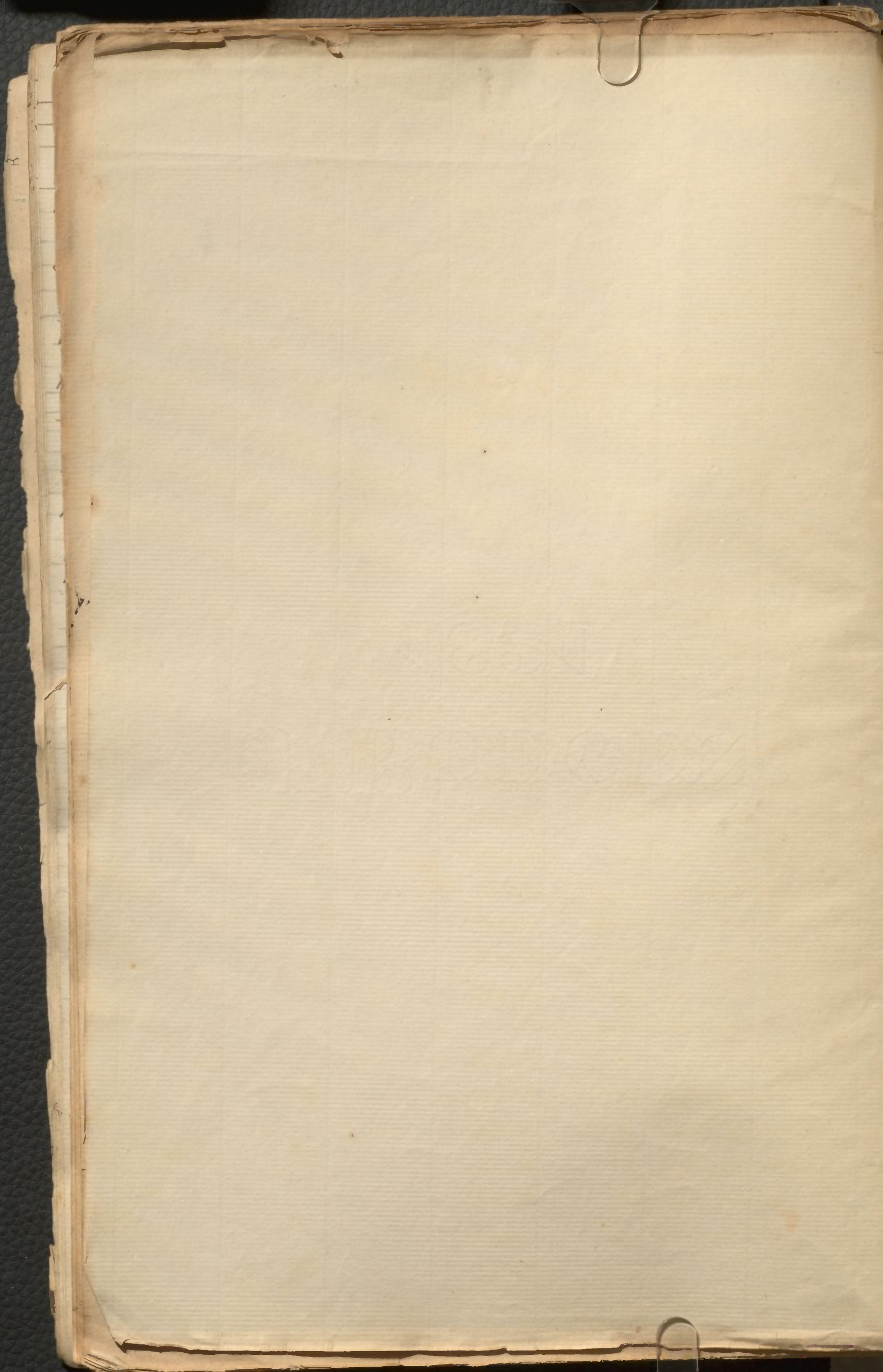
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Logan

Diamond Harbour

1019

Wind direction, Force, Weather, Barometer

1	Light air from the S.E. & hazy	70 @ 2 P.M.	2
2	Light variable winds & hazy	70 @ 2 "	3
3	Fresh Southerly S. & clear	70 @ 2 "	4
4	Light E. winds till noon since fresh	72 @ 2 "	5
5	Northerly winds & hazy ^{Souly breeze}	72 @ 2 "	6
6	Fresh Nor. S. & hazy	64 @ 2 "	7
7	S. S. S. & clear	64 @ 2 "	8
8	Northerly S. & hazy	65 @ 2 "	9
9	Fresh Souly S. S.	71 @ 2 "	10
10	Moderate N.W. winds & hazy	71 @ 2 "	11
11	Light westerly winds S.	74 @ 2 "	12
12	Fresh Nor. S. S.	60 @ 2 "	13
13	S. S. S. & cloudy	66 @ 2 "	14
14	S. S. S. & hazy	60 @ 2 "	15
15	Fresh Nor. wind & hazy	60 @ 2 "	16
16	Fresh N.E. winds S.	65 @ 2 "	17
17	S. N.E. S. S.	66 @ 2 "	18
18	Light Easterly S. & clear	70 @ 2 "	19
19	Fresh Southerly breeze & hazy	72 @ 2 "	20
20	S. S. winds & cloudy	73 @ 2 "	21
21	S. Nor. S. & hazy	61 @ 2 "	22
22	S. S. S. S.	63 @ 2 "	23
23	S. N.E. winds & hazy	64 @ 2 "	24
24	Light N.E. S. S.	66 @ 2 "	25
25	Fresh Souly breeze S.	72 @ 2 "	26
26	Light N.E. winds S.	70 @ 2 "	27
27	Fresh N.E. S. S.	66 @ 2 "	28
28	Light Easterly S. S.	60 @ 2 "	29
29	Light Easterly winds	70 @ 2 "	30
30	S. Souly winds & hazy	70 @ 2 "	31

Kedron

Diamond Harbour

1019

March 29th Weather

Thurs

March 30th Weather

- 1 Light Easterly winds & hazy 70 @ 2 PM.
- 2 Fresh North S^{outh} S^{outh} 70 @ 2 "
- 3 Light N^{orth} E^{ast} S^{outh} S^{outh} 70 @ 2 "
- 4 Mod^{erate} South winds & hazy 72 @ 2 "
- 5 S^{outh} S^{outh} S^{outh} S^{outh} 74 @ 2 "
- 6 Fresh N^{orth} E^{ast} S^{outh} S^{outh} 72 @ 2 "
- 7 S^{outh} S^{outh} S^{outh} S^{outh} 72 @ 2 "
- 8 Fresh North S^{outh} S^{outh} 74 @ 2 "
- 9 S^{outh} S^{outh} S^{outh} S^{outh} 72 @ 2 "
- 10 S^{outh} S^{outh} S^{outh} S^{outh} wea 71 @ 2 "
- 11 S^{outh} S^{outh} S^{outh} S^{outh} S^{outh} 70 @ 2 "
- 12 Light Vble winds hazy weather
{ latter part fresh South breeze } 73 @ 2 "
- 13 Strong S^{outh} E^{ast} W^{est} winds with hazy wea 76 @ 2 "
- 14 Fresh South winds with hazy wea 76 @ 2 "
- 15 { Fresh S^{outh} S^{outh} S^{outh} S^{outh} S^{outh} } 76 @ 2 "
till 11 AM after clear
- 16 Strong S^{outh} W^{est} S^{outh} with hazy wea 77 @ 2 "
- 17 Light Vble S^{outh} S^{outh} S^{outh} S^{outh} 78 @ 2 "
- 18 Mod^{erate} South S^{outh} S^{outh} S^{outh} S^{outh} 78 @ 2 "
- 19 Strong North winds with hazy wea 74 @ 2 "
- 20 Fresh S^{outh} S^{outh} with hazy wea 73 @ 2 "
- 21 Strong S^{outh} S^{outh} S^{outh} clear S^{outh} 74 @ 2 "
- 22 Fresh North S^{outh} S^{outh} hazy S^{outh} 75 @ 2 "
- 23 Light South S^{outh} S^{outh} S^{outh} S^{outh} 77 @ 2 "
- 24 Fresh S^{outh} breeze & clear 79 @ 2 "
- 25 Strong South winds & clear wea 82 @ 2 "
- 26 S^{outh} breeze from N^{orth} N^{orth} W^{est} hazy S^{outh} 74 @ 2 "
- 27 Fresh S^{outh} from N^{orth} N^{orth} E^{ast} very S^{outh} S^{outh} 75 @ 2 "
- 28 Vble winds from S^{outh} E^{ast} with hazy wea 76 @ 2 "

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Hedges

Diamond Harbour

March days weather

March days weather

1019

March 1 Strong winds from N.W. with hazy weather @ 2 PM

2 S.W. winds S. S. S. 70 @ 2 "

3 Fresh S.W. winds with hazy weather 70 @ 2 "

4 First part Vble air, latter part fresh W. winds with hazy weather 00 @ 2 "

5 Fresh S.W. winds with fine clear weather 02 @ 2 "

6 S. S.W. S. S. Clear weather 01 @ 2 "

7 Strong S.W. S. S. hazy S. 02 @ 2 "

8 Fresh S. S. S. S. S. 04 @ 2 "

9 Vble Winds with clear weather & sultry 04 @ 2 "

10 Vble Light airs & sultry 02 @ 2 "

11 Light Easterly Winds & hazy weather 03 @ 2 "

12 Mod. S.W. breeze with S. S. 02 @ 2 "

13 Light Vble winds S. S. S. 02 @ 2 "

14 S.W. Winds with clear weather 04 @ 2 "

15 Strong S.W. winds with hazy weather 02 @ 2 "

16 S. S.W. S. & hazy - 02 @ 2 "

17 Light S.W. airs with hazy weather 01 @ 2 "

18 Strong S.W. winds S. S. S. 02 @ 2 "

19 Strong breeze from S.W. S. S. 01 @ 2 "

20 S. S.W. winds with clear S. 01 @ 2 "

21 Fresh S.W. breeze S. hazy S. 02 @ 2 "

22 S. S.W. winds S. S. S. 00 @ 2 "

23 Vble Winds with hazy weather 00 @ 2 "

24 Fresh S.W. winds with hazy weather 00 @ 2 "

25 S. S.W. S. S. S. S. 02 @ 2 "

26 Strong S.W. winds & hazy 03 @ 2 "

27 S. S.W. S. S. 03 @ 2 "

28 Fresh S.W. S. S. 04 @ 2 "

29 Mod. North S. S. 03 @ 2 "

30 Moderate S.W. S. S. 04 @ 2 "

31 Strong S.W. winds with a windy appearance 02 @ 2 "

Madagascar

Dumora, Madagascar

March 1899

March 1899

1019

1	Fresh S.W. winds & clear	@ 2 PM
2	Strong S.W. S. & hazy	04 @ 2 "
3	S. S.W. S. & very hazy	02 @ 2 "
4	Strong S.W. S. & cloudy	02 @ 2 "
5	Strong S.W. Gales throughout	0 @ 2 "
6	S. W. S. winds & cloudy with haze	01 @ 2 "
7	S. South East winds & clear	02 @ 2 "
8	S. S.W. Gales & heavy sky much thunder & lightning throughout rain at intervals	0 @ 2 "
9	Light N.W. winds and clear	01 @ 2 "
10	Mod. S.W. S. S. S.	05 @ 2 "
11	S. S.W. winds & clear	02 @ 2 "
12	Fresh S.W. winds & clear heavy rain all night with much thunder	0 @ 2 "
13	Fresh S.W. winds & clear	02 @ 2 "
14	Strong S.W. S. & hazy	@ 2 "
15	S. S. Gales & hazy	03 @ 2 "
16	S. S.W. winds & hazy	03 @ 2 "
17	Strong S.W. Gales S.	04 @ 2 "
18	S. S.W. winds & clear	04 @ 2 "
19	Light S.W. winds & clear	03 @ 2 "
20	Strong S.W. S. S.	03 @ 2 "
21	S. S.W. S. & cloudy	03 @ 2 "
22	Light S. S. E. winds & rain	75 @ 2 "
23	Strong East & North Gales heavy rain 2 PM	71 @ 2 "
24	Fresh S.W. winds & clear sea	00 @ 2 "
25	Fresh S.W. S. S.	03 @ 2 "
26	Strong S.W. S. & hazy	02 1/2 @ 2 "
27	Fresh S.W. winds & hazy	04 @ 2 "
28	Mod. S. S. S. & fine sea	03 @ 2 "
29	Fresh S.W. S. & hazy	04 @ 2 "
30	Mod. S.W. winds & fair	04 @ 2 "

Name of Day Weather Therm Barometer Direction

1879	1	Fresh S.W. Winds & hazy.	04 @ 2 P.M.
	2	Strong S.W. S. S.	04 @ 2 "
	3	S. S.W. S. S.	05 @ 2 "
	4	Fresh S.W. S. & Cloudy	05 @ 2 "
	5	S. S.W. S. Very hazy	05 @ 2 "
	6	S. S.W. S. & hazy	05 @ 2 "
	7	Moderate S.W. winds & hazy	05 @ 2 "
	8	S. S.W. S. S.	05 @ 2 "
	9	Strong S.W. S. S.	05 @ 2 "
	10	S. S.W. S. S.	05 @ 2 "
	11	S. S.W. S. S.	05 @ 2 "
	12	S. S.W. S. & Cloudy	05 @ 2 "
	13	Strong S.W. winds & hazy	05 @ 2 "
	14	S.W. Winds & Cloudy weather	05 @ 2 "
	15	Southerly winds and Cloudy	04 @ 2 "
	16	Strong S.W. winds Very hazy	05 @ 2 "
	17	S. S.W. Gales & Very hazy	05 @ 2 "
	18	S. S.W. Gales throughout	05 @ 2 "
	19	S. Gales from S.W. & Very hazy	05 @ 2 "
	20	Moderate S.W. winds & hazy	05 @ 2 "
	21	S. S.W. winds with Rainy appearance	05 @ 2 "
	22	Strong S.W. S. & hazy.	05 @ 2 "
	23	Moderate S.W. winds & Cloudy	05 @ 2 "
	24	Fresh S.W. winds & Clear	05 @ 2 "
	25	Moderate S.W. S. & Clear	05 @ 2 "
	26	Moderate S.W. S. S.	05 @ 2 "
	27	Light N.E. winds & Breezy	09 @ 2 "
	28	Fresh S. S. & Cloudy dark sky	03 @ 2 "
	29	Winds Vble from S. to S.W. & 70 @ 2 "	
	30	Equally with much Rain	
	31	Moderate Easterly winds with Rain at night	02 @ 2 "
	32	Fresh S.W. winds & hazy	05 @ 2 "

1019

Strong S.W. winds & dark hazy weather	05 @ 2 PM
S.W. winds with hazy weather	06 @ 2 "
S.S.W. winds S. fine S.	06 @ 2 "
Strong S.S.W. winds & clear wea	07 @ 2 "
Variable winds with S. S.	05 @ 2 "
Light S.W. winds S. S. S.	05 @ 2 "
S. breeze from South & cloudy	06 @ 2 "
S. South winds with heavy cloudy wea	04 @ 2 "
S.W. winds heavy clouds & sultry S.	06 @ 2 "
Light South winds hazy wea & light showers	03 @ 2 "
Strong S.W. S. hazy wea & rain throughout	00 @ 2 "
Light Vble air with Hazy weather	04 @ 2 "
Fresh S.W. winds & hazy weather	07 @ 2 "
S.S.W. winds & hazy with sultry S.	07 @ 2 "
Strong S.W. winds S. hazy wea	06 @ 2 "
S.S.E. Winds with hazy wea & cloudy	02 @ 2 "
Moderate S.W. winds with clear wea	05 @ 2 "
Strong S.W. S. S. S. S.	06 @ 2 "
Vble winds & cloudy wea much Rain	07 @ 2 "
Variable winds and Squally	02 @ 2 "
Strong Gales from S.E. with S. & Rain	09 @ 2 "
S. S.W. winds with hazy wea	04 @ 2 "
Fresh S.W. S. S. S. S.	04 @ 2 "
Strong S.W. S. S. S. S.	05 @ 2 "
Vble Light winds & cloudy with Rain	00 @ 2 "
Strong winds, hazy thick wea heavy S. thunder & lightning	02 @ 2 "
Fresh S.W. winds & hazy weather	01 1/2 @ 2 "
Strong S.W. winds S. S.	05 @ 2 "
Fresh South winds & clear	04 @ 2 "
S. S. S. & clear weather	00 @ 2 "

Diurnal Weather

March 1891

June

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July

Barometer

Month days Weather

Month

Month days Weather

1819

1	Strong S.W. winds with cloudy sea heavy rain last night from 7 to 11 PM	04 @ 2 PM
2	S.W. winds and cloudy weather	02 @ 2 "
3	Strong S.W. winds & clear weather	04 @ 2 "
4	S.E. Winds & clear weather	04 @ 2 "
5	Strong S.E. winds & hazy sea frequent squalls	04 @ 2 "
6	South East winds & clear sea	04 @ 2 "
7	S.E. Winds and squalls	04 @ 2 "
8	Strong Sou'ly winds & haze	05 @ 2 "
9	Light Sou'ly winds & clear weather	04 @ 2 "
10	Mod ^{te} S.E. & fine S.	04 @ 2 "
11	Strong S.E. winds & cloudy	04 @ 2 "
12	Fresh Sou'ly winds & frequent light showers of rain	03 @ 2 "
13	Mod ^{te} Easterly winds & clear	03 @ 2 "
14	Strong Sou'ly winds & vble squalls of rain	04 @ 2 "
15	S. vble East ^{ly} S. & flying squalls of rain	04 @ 2 "
16	S. S. S. S. with con. S. of wind S.	02 @ 2 "
17	Strong S.E. gales & heavy squalls	06 @ 2 "
18	Mod ^{te} S.E. winds & dark clouds, W. of rain	79 @ 2 "
19	Light vble winds & cloudy sultry sea	01 @ 2 "
20	Mod ^{te} Easterly winds & cloudy	01 @ 2 "
21	S. S. S. & sultry sea	04 @ 2 "
22	Fresh East ^{ly} & sou'ly winds & sultry	00 @ 2 "
23	Heavy gales from E. & S. heavy squalls	02 @ 2 "
24	Strong S.E. gales & heavy squalls until 9 AM	70 @ 2 "
25	Mod ^{te} Sou'ly winds & cloudy	75 @ 2 "
26	Light N.E. winds & very sultry sea	02 @ 2 "
27	S. vble S. from Eastward of rain	00 @ 2 "
28	Fresh S.E. winds & flying showers	01 @ 2 "
29	Strong S.W. S. and hazy	01 @ 2 "
30	S. S. S. W. S. & a black sky	02 @ 2 "
31	Squally Rain from Eastward	

Redfern

Months	Weather	Therm ^y
1879		
Aug ^r	1 Light Southerly winds, & very Sultry	80 @ 2 PM
	2 Moderate S.E. winds, attended with much Sultry heat	79 @ 2 "
	3 Light Easterly S ^y , & very Sultry	80 @ 2 "
	4 S.W. winds, and Clear weather	82 @ 2 "
	5 Light Variable Winds & Sultry weather	82 @ 2 "
	6 S ^y S ^y S ^y S ^y S ^y	84 1/2 @ 2 "
	7 Moderate S.E. Winds with much sultry heat	86 @ 2 "
	8 Light S.W. winds with Cloudy weather	84 @ 2 "
	9 S.E. winds and Squally	79 @ 2 "
	10 S.E. S ^y S ^y Cloudy weather	82 @ 2 "
	11 S.E. S ^y S ^y Squally	70 @ 2 "
	12 Moderate S.W. winds & cloudy weather	79 @ 2 "
	13 Fresh Southerly S ^y & Clear	82 @ 2 "
	14 Light S.W. winds & Clear weather	83 @ 2 "
	15 Variable winds and Cloudy weather	84 @ 2 "
	16 Light Variable winds & Cloudy S ^y	84 @ 2 "
	17 S ^y Southerly S ^y & very sultry weather	84 @ 2 "
	18 Light Variable winds & Cloudy weather	82 @ 2 "
	19 S.E. Winds and Cloudy weather with Rain	82 @ 2 "
	20 Strong Easterly Gales with Showers	82 @ 2 "
	21 S.W. winds & Clear weather	82 @ 2 "
	22 Light Variable winds & Cloudy weather	80 @ 2 "
	23 Fresh S.W. winds & Cloudy weather	80 @ 2 "
	24 Fresh S.W. winds & Cloudy S ^y	82 @ 2 "
	25 S.W. winds blowing fresh with Showers	80 @ 2 "
	26 S.W. winds and Constant Rain	77 @ 2 "
	27 Strong S.W. winds & cloudy weather	82 @ 2 "
	28 Variable winds & Cloudy S ^y	80 @ 2 "
	29 Strong Easterly winds & Cloudy weather	82 @ 2 "
	30 S ^y S.W. S ^y S ^y S ^y	80 @ 2 "
	31 Fresh S.W. winds & Cloudy S ^y	80 @ 2 "

Diamond Harbour

months

weather

Redgum

Months	Days	Weather	Therm ^s
1819			
Sept ^r	1	Variable winds & Cloudy weather	00 @ 2 PM
	2	Light S.W. winds & Cloudy weather with Rain	70 @ 2 "
	3	Strong S.W. S. with Showers	00 @ 2 "
	4	S.W. winds & Clear weather	02 @ 2 "
	5	Light Variable winds & Sultry weather	00 @ 2 "
	6	Variable winds & Cloudy weather	02 @ 2 "
	7	Variable S. and Showers	79 @ 2 "
	8	S.W. winds & much Rain	70 @ 2 "
	9	Strong S.W. winds & Cloudy weather	00 @ 2 "
	10	S.E. Winds and Cloudy weather	79 @ 2 "
	11	Strong N.E. winds & Cloudy S.	01 @ 2 "
	12	S. S.E. winds with squalls of Rain	75 @ 2 "
	13	S. S.W. S. and Squally	79 @ 2 "
	14	S. S.W. S. and Clear weather	00 @ 2 "
	15	Light S.W. winds & Cloudy S.	01 @ 2 "
	16	S. S.W. S. & Clear S.	03 @ 2 "
	17	Variable winds and Cloudy weather	04 @ 2 "
	18	S. S. S. S. S.	02 @ 2 "
	19	Light Variable winds and very Sultry weather	04 @ 2 "
	20	Variable Winds & very Sultry with Cloudy	04 @ 2 "
	21	S. S. S. S. weather	05 @ 2 "
	22	S. S. S. S. S.	00 @ 2 "
	23	Strong S.W. winds & very Cloudy weather	00 @ 2 "
	24	S.W. winds & heavy Cloudy weather	03 @ 2 "
	25	Strong S.E. winds & squally with Rain	70 @ 2 "
	26	S.W. winds & Cloudy weather from 7 PM to 11 am with Strong S.E. Gale & much Rain	00 @ 2 "
	27	From 11 PM to 9 am Strong S.E. Gale with heavy Rain Squally & Cloudy	00 @ 2 "
	28	Strong S.W. winds & Cloudy weather	02 @ 2 "
	29	S. S.W. S. S. S.	02 @ 2 "
	30	Light S.W. S. and fine S.	03 @ 2 "

Diamond Harbour

Kedgerue

Months Days

Weather

1819

Oct.

1 Fresh S. W. winds & Clear weather

0.5 @ 2 PM

2 E. S. Winds & Cloudy weather

0.4 @ 2 "

3 Light Variable winds & Cloudy weather

0.4 @ 2 "

4 S. E. Winds and showers of Rain

0.0 @ 2 "

5 S. E. winds & showers of Rain

7.9 @ 2 "

6 S. E. winds & heavy Rain

7.9 @ 2 "

7 Strong Southerly winds & Cloudy weather

0.0 @ 2 "

8 Fresh Southerly winds & fine weather

0.2 @ 2 "

9 Variable winds & sultry weather

0.2 @ 2 "

10 Light Northerly winds & fine weather

0.2 @ 2 "

11 S. S. E. & Clear S.

0.1 @ 2 "

12 Northerly winds & hazy weather

0.2 @ 2 "

13 Fresh North. S. & Cloudy S.

0.2 @ 2 "

14 S. W. winds and Cloudy S.

7.9 @ 2 "

15 Fresh Northerly winds & Clear

0.2 1/2 @ 2 "

16 S. S. E. & hazy

0.2 @ 2 "

17 Strong Easterly Gale with Rain all night, since winds, S. & squally, fresh, 7.0 @ 2 "

18 S. S. Southerly winds & very hazy

0.1 @ 2 "

19 S. S. W. winds & hazy squalls

0.0 @ 2 "

20 Mod. S. W. winds & very hazy

7.9 @ 2 "

21 Variable winds & Cloudy weather

0.0 @ 2 "

22 Light S. W. winds & showers

0.1 @ 2 "

23 Variable winds & fine weather

7.9 @ 2 "

24 S. S. E. & fine S.

7.0 @ 2 "

25 Light Northerly winds & fine weather

7.7 @ 2 "

26 Light Northerly winds & fine weather

7.0 @ 2 "

27 Fresh S. S. E. & hazy S.

7.0 @ 2 "

28 Light Northerly winds & Clear

7.9 @ 2 "

29 S. S. E. & Cloudy

0.0 @ 2 "

30 S. S. E. & Clear

0.1 @ 2 "

31 Fresh Northerly Winds & Clear

0.0 1/2 @ 2 "

Diamond Harbour

Kedgess

Months	Days	Weather	Therm ^s
10	19		
Nov ^r	1	Fresh Northwly winds and fine weather	82 @ 2 PM
	2	Light S ^e S ^e S ^e Clear	82 @ 2 "
	3	S ^e S. W. winds and Cloudy	82 @ 2 "
	4	Fresh Northwly winds & fine weather	81 @ 2 "
	5	S ^e S ^e S ^e & Clear	79 @ 2 "
	6	S ^e S ^e S ^e & fine weather	74 @ 2 "
	7	Light S ^e S ^e & Cloudy	79 @ 2 "
	8	Fresh S ^e S ^e S ^e	77 @ 2 "
	9	Variable winds & Cloudy weather	73 @ 2 "
	10	Fresh Northwly winds & Clear	70 @ 2 "
	11	S ^e S ^e S ^e & fine weather	70 @ 2 "
	12	Light S ^e S ^e & haze	79 @ 2 "
	13	Variable winds and Cloudy	75 @ 2 "
	14	Light Variable winds & Cloudy	70 @ 2 "
	15	Variable winds & Cloudy	70 @ 2 "
	16	Strong N. E. winds and Equally	72 @ 2 "
	17	S ^e E. S ^e S ^e S ^e Cloudy	75 @ 2 "
	18	Light N. E. S ^e S ^e S ^e	70 @ 2 "
	19	Fresh Northwly winds & Clear	75 @ 2 "
	20	S ^e N. E. winds & fine weather	70 @ 2 "
	21	Fresh Northwly winds & Clear	72 @ 2 "
	22	S ^e S ^e S ^e S ^e	72 @ 2 "
	23	S ^e S ^e S ^e S ^e	72 @ 2 "
	24	Light S ^e S ^e S ^e	73 @ 2 "
	25	S ^e S ^e S ^e S ^e	72 @ 2 "
	26	S ^e E. S ^e winds & hazy weather	74 @ 2 "
	27	Fresh Northwly winds & Clear	70 @ 2 "
	28	Light S. E. winds & Clear	70 @ 2 "
	29		
	30	Light Northwly winds and Clear	74 @ 2 "

Diamond Harbour

Ridgeway

Months Days

Therm^s

1819

Dec^r

1 Fresh Northerly winds & Clear

67 @ 2 PM

2 S₁ S₁ S₁ & Clear

67 @ 2 "

3 S₁ S₁ S₁ S₁

67 @ 2 "

4 Light N₁ E₁ winds and Clear

71 @ 2 "

5 Fresh Northerly winds & hazy

72 @ 2 "

6 Light Variable S₁ S₁

70 @ 2 "

7 Fresh Northerly Breezes & fine weather

70 @ 2 "

8 Light winds from the S₁ E₁ and hazy weather

74 @ 2 "

9 Fresh Breezes S₁ S₁ E₁ and hazy weather

72 @ 2 "

10 S₁ S₁ E₁ Winds and hazy

70 @ 2 "

11 Light S₁ E₁ winds S₁ S₁

74 @ 2 "

12 S₁ N₁ E₁ S₁ S₁ S₁

74 @ 2 "

13 S₁ Northerly winds S₁ S₁

74 @ 2 "

14 S₁ N₁ E₁ winds and hazy

74 @ 2 "

15 S₁ S₁ W₁ S₁ 100

74 @ 2 "

16 Fresh Northerly winds & hazy

73 @ 2 "

17 S₁ S₁ E₁ winds and hazy

73 @ 2 "

18 S₁ S₁ E₁ S₁ S₁

71 @ 2 "

19 S₁ E₁ Winds and hazy

72 @ 2 "

20 Light S₁ E₁ winds and hazy

74 @ 2 "

21 Light N₁ Easterly winds & hazy

73 @ 2 "

22 S₁ Northerly S₁ & hazy

71 @ 2 "

23 S₁ Easterly S₁ S₁

70 @ 2 "

24 S₁ S₁ S₁ S₁

70 @ 2 "

25 Fresh N₁ E₁ Winds & hazy weather

72 @ 2 "

26 Strong N₁ E₁ S₁ S₁

69 @ 2 "

27 S₁ N₁ E₁ S₁ S₁

67 @ 2 "

28 S₁ N₁ wind and hazy

67 @ 2 "

29 Light Northerly winds & hazy

68 @ 2 "

30 Light N₁ E₁ winds & hazy

71 @ 2 "

31 S₁ N₁ E₁ S₁ & S₁

72 " 2 "

Kedgeru

months	days	Weather	Therm?
1020			
Jan'y.	1	Light N.E. winds and hazy	89 @ 2 PM.
	2	Fresh N.E. S. S. S.	87 @ 2 "
	3	Winds N.W. and Clear	85 @ 2 "
	4	Strong N. winds & hazy	84 @ 2 "
	5	Winds N.E. & hazy	84 @ 2 "
	6	Strong N.W. winds & hazy	82 @ 2 "
	7	S. N.W. S. S.	84 @ 2 "
	8	Strong N.E. S. S.	81 @ 2 "
	9	S. N.W. winds & hazy	84 @ 2 "
	10	S. N.E. S. S.	85 @ 2 "
	11	S. Southerly wind & Clear	80 @ 2 "
	12	Light N.W. winds & hazy	85 @ 2 "
	13	S. Northerly winds & hazy	84 @ 2 "
	14	S. S. S. S.	85 @ 2 "
	15	S. N.E. S. S.	87 @ 2 "
	16	S. Southerly S. S.	80 @ 2 "
	17	Strong S.E. S. S.	80 @ 2 "
	18	S. N.E. S. S.	87 @ 2 "
	19	Light Easterly winds & hazy	87 @ 2 "
	20	Strong N.E. S. S.	87 @ 2 "
	21	Light S.E. winds & hazy	87 @ 2 "
	22	S. N.E. S. S.	80 @ 2 "
	23	S. N.E. S. S.	80 @ 2 "
	24	Strong S.E. S. & Clear	80 @ 2 "
	25	Light N.E. winds & hazy	80 @ 2 "
	26	S. Easterly S. & Clear	72 @ 2 "
	27	Strong N.W. S. & hazy	70 @ 2 "
	28	Strong N.W. S. S.	70 @ 2 "
	29	Strong Northerly S. S.	89 @ 2 "
	30	Strong N.E. winds & Clear	89 @ 2 "
	31	S. N.E. S. & Clear	70 @ 2 "

Diamond Harbour

Redgera

months	days	weather	Therm [°]
1020			
Feb ^y	1	Variable Light winds and hazy	70 @ 2 PM
	2	Strong Southerly winds & hazy	72 @ 2 "
	3	S _w S _w S _w S _w	74 @ 2 "
	4	S _w Northw _{ly} S _w & clear	73 @ 2 "
	5	S _w S _w S _w S _w	80 @ 2 "
	6	Light Easterly S _w & hazy	80 @ 2 "
	7	S _w S _w S _w & clear	89 @ 2 "
	8	S _w S _w S _w & hazy	72 @ 2 "
	9	S _w S _w E _w Winds & hazy	72 @ 2 "
	10	Fresh Westerly Breezes & hazy	72 @ 2 "
	11	Light Southerly winds & hazy	73 @ 2 "
	12	S _w S _w S _w S _w	75 @ 2 "
	13	Fresh S _w S _w S _w	75 @ 2 "
	14	Light S _w S _w S _w	75 @ 2 "
	15	Fresh S _w S _w S _w	75 @ 2 "
	16	Light S _w S _w S _w	77 @ 2 "
	17	S _w S _w S _w & fair	75 @ 2 "
	18	S _w N _w E _w winds & hazy	77 @ 2 "
	19	S _w N _w E _w S _w & hazy	77 @ 2 "
	20	Fresh S _w W _w Breezes & clear	75 @ 2 "
	21	Light Easterly airs & hazy	77 @ 2 "
	22	S _w Southerly winds & clear	78 @ 2 "
	23	Strong S _w S _w & clear	75 @ 2 "
	24	S _w Northw _{ly} S _w & hazy	80 @ 2 "
	25	Fresh N _w E _w winds & hazy	71 @ 2 "
	26	Light N _w E _w S _w S _w	70 @ 2 "
	27	Fresh Northw _{ly} winds & hazy	72 @ 2 "
	28	Light N _w S _w E _w S _w S _w	72 @ 2 "
	29	S _w Southerly S _w S _w	74 @ 2 "
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Diamond Harbour

Month the days

1820

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Kedgeree

months Days weather

1820

April	1	From Yesterday to 7 am Strong S.W. to S.E. Gales with Rain since strong N.E. winds & clear	74 @ 2 P.M.
	2	Moderate Southerly winds & clear	79 @ 2 "
	3	Strong Southerly winds & clear	70 @ 2 "
	4	Fresh S.W. winds & very Hazy	79 @ 2 "
	5	Light Southerly winds & hazy	79 @ 2 "
	6	S. S. S. S.	81 @ 2 "
	7	S. S. S. S.	82 @ 2 "
	8	Strong Southerly winds & hazy	82 @ 2 "
	9	Fresh S. S. S.	84 @ 2 "
	10	Strong Southerly Winds & hazy	84 @ 2 "
	11	S. S. S. S.	83 @ 2 "
	12	S. S.W. winds & clear	84 @ 2 "
	13	Strong Wind from the South & West quarter	84 @ 2 "
	14	S. S. from the South & Hazy	83 @ 2 "
	15	S. Southerly winds & hazy	83 @ 2 "
	16	S. South wind and Cloudy	82 @ 2 "
	17	Wind from the South & hazy	82 @ 2 "
	18	Strong S.W. winds & hazy	84 @ 2 "
	19	Brisk Gales from the Southward & Cloudy weather	84 @ 2 "
	20	Strong Southerly Wind & Cloudy	84 @ 2 "
	21	S. S.W. winds and hazy	84 @ 2 "
	22	Strong W. S.W. winds & hazy	82 @ 2 "
	23	S. Gales from the southward and Hazy	82 @ 2 "
	24	S. S.W. Winds and Clear	84 @ 2 "
	25	Strong S.W. Gales and Hazy	83 @ 2 "
	26	S. S.W. S. S. S.	83 @ 2 "
	27	S. S.W. Gales S. S.	83 @ 2 "
	28	S. S.W. S. S. S.	84 @ 2 "
	29	Strong S.W. Gales & hazy	84 @ 2 "
	30	Strong S.W. winds and Clear	83 @ 2 "

Kedgeree

months	Days	Weather	Therm ^s
1820			
May	1	Strong S. W. winds & Clear	83 @ 2 PM
	2	Strong S. W. Winds & Hazy	83 @ 2 "
	3	S. Southerly winds and Cloudy	82 @ 2 "
	4	Strong S. W. winds and Clear	83 @ 2 "
	5	Strong S. W. winds and Clear	83 @ 2 "
	6	Fresh S. W. winds and Clear	83 @ 2 "
	7	Light airs and Variable	84 @ 2 "
	8	S. Northerly winds and Clear	86 @ 2 "
	9	Strong S. S. E. winds with a Windy appearance	86 @ 2 "
	10	Fresh S. S. W. winds & Clear	86 @ 2 "
	11	S. S. W. winds and Clear	86 @ 2 "
	12	Strong S. W. Gales and Hazy	86 @ 2 "
	13	S. Southerly Gales and very hazy	86 @ 2 "
	14	S. S. Gales throughout	86 @ 2 "
	15	Light Northerly winds and Cloudy	85 @ 2 "
	16	Strong Southerly Gales and very Gloomy	84 @ 2 "
	17	Strong S. W. winds and Hazy	85 @ 2 "
	18	S. S. W. winds and Hazy	87 @ 2 "
	19	Light Variable winds and Clear	86 @ 2 "
	20	Strong Southerly winds and Clear	86 @ 2 "
	21	S. S. W. winds and Hazy	86 @ 2 "
	22	Light S. W. winds and Cloudy	87 @ 2 "
	23	Light Southerly winds and Clear	89 @ 2 "
	24	Light S. W. winds and Hazy	87 @ 2 "
	25	Light Southerly winds and Clear	87 @ 2 "
	26	Light S. W. winds and Hazy	87 @ 2 "
	27	Strong Southerly winds and hazy	87 @ 2 "
	28	Strong Southerly winds and hazy	88 @ 2 "
	29	Fresh Southerly winds and appearance of Rain	83 @ 2 "
	30	Moderate Southerly winds and Clear	83 @ 2 "
	31	Variable winds & squally with Rain & very Cloudy	80 @ 2 "

Diamond Harbour

months days

1920
May

Weather

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Kedgeroe

Months	days	weather	Therm ^s
1820			
June	1	Fresh Southerly winds & dark weather with Rain	70 @ 2 PM
	2	Strong S. W. winds & dark Cloudy weather with Rain	02 @ 2 "
	3	Strong S. W. winds and very Cloudy Hazy	02 @ 2 "
	4	Fresh S. W. winds and very Hazy	04 @ 2 "
	5	Moderate Southerly winds & dark Cloudy weather	02 @ 2 "
	6	Do Do Do and Hazy	04 @ 2 "
	7	Fresh Southerly winds and Hazy	00 @ 2 "
	8	Strong Southerly winds & Hazy	00 @ 2 "
	9	Southerly winds with squalls of wind and Rain	03 @ 2 "
	10	Fresh Southerly winds and Hazy	00 @ 2 "
	11	Moderate Southerly winds and Hazy	00 @ 2 "
	12	Fresh Southerly winds and Hazy	07 @ 2 "
	13	Light S. S. S. and Clear	00 @ 2 "
	14	Moderate Easterly winds with distant Thunder & dark	00 @ 2 "
	15	Strong South ^{ly} & East ^{ly} Gales with heavy squalls of wind & Rain ^{weather}	03 @ 2 "
	16	Heavy flying Squalls with much rain from S. W. thunder & lightning	02 @ 2 "
	17	Moderate S. W. winds and Clear	02 @ 2 "
	18	Moderate Westerly winds and dark weather	02 @ 2 "
	19	Do Southerly winds & Hazy - very heavy rain until noon	01 @ 2 "
	20	S. W. winds generally & variable with heavy rain	00 @ 2 "
	21	Fresh S. W. winds and Clear	02 @ 2 "
	22	Fresh S. S. E. winds and Clear	03 @ 2 "
	23	Moderate S. W. winds and Hazy	04 @ 2 "
	24	Light Variable wind and Clear, with very sultry weather	02 @ 2 "
	25	Moderate S. W. winds and dark weather	70 @ 2 "
	26	Strong S. W. Gales with flying Squalls of Rain & gusts of wind	01 @ 2 "
	27	Fresh S. W. winds with dark weather	00 @ 2 "
	28	Moderate S. W. winds and Clear	03 @ 2 "
	29	Light Easterly winds and Clear	02 @ 2 "
	30	Light S. W. winds and Hazy	02 @ 2 "
	31		

Diamond Harbour

month's day

1820 June

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- 21 Light Variable breezes & squally with Rain & cloudy weather
22 Fine S. W. breezes and fair weather
23 Fine N. W. breezes and cloudy weather with Showers of Rain
24 Light Variable winds and cloudy weather
25 Variable winds from S. W. to S. N. and squally with Rain & cloudy weather
26 Fine S. W. breeze and cloudy hazy weather with small Rain
27 Fine S. W. breezes and cloudy weather
28 Light Variable breezes and cloudy weather with small Rain
29 Variable winds and squally weather with Rain
30 Light Southerly breezes and cloudy weather

Kedgess

Months days	Weather	Therm.
1020 Aug ^t 1	Moderate S. W. winds and very sultry hazy weather	80 @ 2 P.M.
2	Fresh S. W. winds and dark weather	70 @ 2 "
3	Moderate S. W. winds and Clear	80 @ 2 "
4	Fresh S. W. winds and Clear	82 @ 2 "
5	Fresh S. W. winds and Clear	83 @ 2 "
6	Fresh S. W. winds and Clear	82 @ 2 "
7	Light variable winds from the Southward and Eastward	83 @ 2 "
8	Light variable winds and squally appearance	81 @ 2 "
9	Squally with variable winds from the Eastward	70 @ 2 "
10	Fresh Easterly winds and Rain	70 @ 2 "
11	Moderate Southerly winds and Cloudy	77 @ 2 "
12	Moderate Southerly winds and Clear	81 @ 2 "
13	Moderate Southerly winds and Clear	83 @ 2 "
14	Winds variable from the Eastward and squally Rain	79 @ 2 "
15	Variable Easterly winds and squally	79 @ 2 "
16	Fresh N. E. Winds and Cloudy	83 @ 2 "
17	Strong N. E. winds and Clear	82 @ 2 "
18	Strong N. E. winds and Clear	83 @ 2 "
19	For part Strong squalls from E. N. E. latter part Ob. & strong squalls from E. N. E. Rain	80 @ 2 "
20	Strong Southerly winds very squally with Rain	75 @ 2 "
21	Light S. W. winds with hazy weather and Rain	70 @ 2 "
22	Light Breezes from W. S. W. with fine Clear weather	82 @ 2 "
23	Light Northerly winds and fine weather	84 @ 2 "
24	Variable winds and Heavy Squall with much Rain	83 @ 2 "
25	Fresh Northerly winds with frequent squalls and Rain	82 @ 2 "
26	Strong Northerly winds with frequent hard S. & Rain	82 @ 2 "
27	" Southerly winds with frequent squalls and Rain	80 @ 2 "
28	S. W. winds with squalls and frequent Showers of Rain	70 @ 2 "
29	Fresh S. W. winds and fine weather	80 @ 2 "
30	S. W. winds and fine weather	82 @ 2 "
31	Light variable winds and Cloudy weather heavy Rain during the night	80 @ 2 "

Diamond Harbour

Months	Days	Weather	Therm ^y
1820 Aug th	1	Variable breezes and Cloudy weather with Small Rain	
	2	Fresh S. W. breezes with Rain and Cloudy weather	
	3	Variable breezes and Cloudy weather attended with Showers of Rain	
	4	Fresh S. W. breezes and Cloudy weather	
	5	Fine S. S. W. breezes and Cloudy weather	
	6	Fresh Southerly breezes & Squally with Rain and Cloudy	
	7	Fine Southerly breezes and Cloudy weather	
	8	Light breezes from the Southward & Westward with Showers of Rain & Cloudy ^{sea}	
	9	Fresh East and S. E. breezes and Cloudy with Showers of Rain	
	10	Fresh S. E. breezes with small Rain and Cloudy weather	
	11	Variable Fresh breezes with Rain and Cloudy weather	
	12	Light Vbl breezes, attended with Showers of Rain & Cloudy weather	
	13	Light winds, and variable, and Cloudy weather	
	14	Variable breezes and Squally with heavy Showers of Rain & Cloudy ^{sea}	
	15	Variable winds, and Calms and Cloudy weather	
	16	Fresh East & S. Easterly breezes attended with Squalls heavy Rain thunder & lightning	
	17	Fresh Easterly winds attended with Squalls of Rain and Cloudy	
	18	Fresh Easterly Gales and Squally with Rain and Cloudy weather	
	19	Fresh Easterly Gales with Rain and Cloudy weather	
	20	First part fresh Easterly Gales, with Squally of Rain. Mid. pt. Vbl with Rain & Cloudy ^{sea}	
	21	Light Southerly breezes and Squally with Rain and Cloudy weather	
	22	Light variable airs with Calms and Cloudy weather	
	23	Light variable breezes and Calms with Cloudy weather	
	24	Light Easterly and variable winds and Cloudy weather	
	25	Fresh N. E. Gales with Showers of Rain and Cloudy weather	
	26	First & middle part fresh N. E. Gales latter variable Squally rain throughout	
	27	Fresh Winds from the Southward & Eastward & Squally with Rain	
	28	Fresh Southerly breezes and Squally with Rain and Cloudy weather	
	29	Fresh Southerly breezes, and Squally with Rain and Cloudy weather	
	30	Fresh S. W. breezes with Rain and Cloudy weather	
	31	First part Easterly winds with Squalls and Rain. Middle & latter light Southerly breezes & fine ^{sea}	

Redgerie

months	days	Weather	Therm ^s
1820	Sept ^r		
	1	Light Variable airs and Cloudy	81 @ 2 PM
	2	Light S. E. winds and Cloudy	80 @ 2 "
	3	Light Variable winds with Cloudy weather & cont ^d Rain	70 @ 2 "
	4	Fresh S. W. winds and fine weather	82 @ 2 "
	5	Fresh S. W. winds and hazy weather	82 @ 2 "
	6	Fresh S. W. winds and Cloudy	84 @ 2 "
	7	Variable winds Southerly & squally with much Rain	79 @ 2 "
	8	Moderate S. W. winds and Hazy	82 @ 2 "
	9	Moderate S. W. winds and Hazy	84 @ 2 "
	10	Light Variable winds and very Oppression Sultry heat	83 @ 2 "
	11	Light Variable winds from the Eastward	83 @ 2 "
	12	Light Variable winds and very Sultry	83 @ 2 "
	13	Light Variable winds and Hazy	80 @ 2 "
	14	Light N. E. & Easterly winds and Cloudy	82 @ 2 "
	15	Wind Easterly and dark weather	80 @ 2 "
	16	Moderate Southerly winds and Clear	82 @ 2 "
	17	Fresh S. W. winds and Clear	84 @ 2 "
	18	Light Southerly winds and Hazy	82 @ 2 "
	19	Light Variable airs and Cloudy	82 @ 2 "
	20	Fresh N. E. Breezes and fine weather	84 @ 2 "
	21	Moderate N. E. winds and Clear	85 @ 2 "
	22	Fresh Northerly winds and Clear	86 @ 2 "
	23	S. Easterly winds and Clear	84 @ 2 "
	24	Strong Easterly Gales and squally with heavy Rain	80 @ 2 "
	25	Strong Gales from the Southward	80 @ 2 "
	26	Fresh S. W. winds and Hazy	81 @ 2 "
	27	Moderate Southerly winds and dark weather	80 @ 2 "
	28	Moderate S. W. winds and Clear	83 @ 2 "
	29	Light variable winds from the S. ward	83 @ 2 "
	30	Light N. W. winds & Clear	84 @ 2 "

Diamond Harbour

Months days

Weather

- 1820 Sept^r
- 1 Light airs and Variable with Cloudy weather
 - 2 Light Variable Winds and Cloudy weather
 - 3 Light Southerly breezes attended with Showers of Rain & Cloudy weather
 - 4 Fresh S.W. breezes and Cloudy weather
 - 5 Fresh Southerly breezes and Cloudy weather
 - 6 Light variable airs and Calms with Hazy Cloudy weather
 - 7 Variable winds and Squally with Rain and Cloudy weather
 - 8 First & Middle part, Light Vble breeze, & fair weather, latter squally Rain from S.W. & Cloudy weather
 - 9 Variable light breezes and Calms and fair weather
 - 10 Light Variable breezes and hot Cloudy weather
 - 11 First & Middle part light N.W. breezes latter Southerly & Cloudy weather
 - 12 Light breeze from the Northward, and Eastward with Rain & Cloudy weather
 - 13 Variable winds and Calms with small Rain and Cloudy weather
 - 14 Light variable breezes attended with Squally Rain and Cloudy weather
 - 15 Light Southerly breezes with Showers of Rain and Cloudy weather
 - 16 Light Southerly breezes attended with Showers of Rain & Cloudy weather
 - 17 Fine Southerly breezes and Cloudy weather
 - 18 First part light Northwly breezes, Middle & latter Southerly & Cloudy weather
 - 19 Light airs and Variable with Rain and Cloudy weather
 - 20 First & Middle part fine N.E. breezes & fair weather, latter Southerly breezes Thunder & Cloudy weather
 - 21 Fine N.E. breezes and fair weather
 - 22 Fine N.E. breezes and fair weather
 - 23 Fresh Easterly breezes and Cloudy weather
 - 24 Fresh breezes from East to S.E. with heavy Rain and Cloudy weather
 - 25 Fresh Gales from Southward to Eastward with heavy Rain & Cloudy weather
 - 26 Fine breezes from Southward and Westward and Cloudy weather, with Showers of Rain
 - 27 Fine Southward breezes and Cloudy weather
 - 28 Fine Southerly breezes and Cloudy weather
 - 29 Light Variable airs and fair weather
 - 30 Light airs and Variable and Clear weather

Register

Months days	Weather	Therm ^y
1020		
Oct ^r		
1	Light Northerly winds and Clear	03 @ 2 PM
2	Light N. W. winds and Clear	00 @ 2 "
3	Fresh Northerly winds and hazy	01 @ 2 "
4	Moderate Northerly winds & fair & a heavy squalls from E. with wind & Rain	03 @ 2 "
5	Strong N. E. Gales & equally with Rain	70 @ 2 "
6	Fresh Southerly winds and Clear	02 @ 2 "
7	Moderate S. W. winds and fair	02 @ 2 "
8	Fresh S. W. winds and Clear	03 @ 2 "
9	Fresh Southerly winds & Clear	00 @ 2 "
10	Light winds from S. W. and Clear	00 @ 2 "
11	Light Northerly winds and fine weather	02 @ 2 "
12	Light N. E. winds and Clear	02 @ 2 "
13	Light N. W. winds and Sultry weather	02 @ 2 "
14	Light N. E. winds and Cloudy	70 @ 2 "
15	Light N. E. winds and Clear	02 @ 2 "
16	Fresh N. E. winds and Clear	03 @ 2 "
17	Fresh Northerly winds and Clear	02 @ 2 "
18	Light N. E. winds and Clear	03 @ 2 "
19	Moderate N. E. winds and Sultry	01 @ 2 "
20	Moderate Northerly winds and Clear	00 @ 2 "
21	Light N. E. Winds and fair	00 @ 2 "
22	Light Variable winds and Clear	00 @ 2 "
23	Light N. W. winds and Clear	00 @ 2 "
24	Light Variable airs and Sultry	00 @ 2 "
25	Light Variable winds and Calms	00 @ 2 "
26	Moderate Northerly winds and Clear	02 @ 2 "
27	Light Easterly winds and Clear	00 @ 2 "
28	Light Northerly winds and Clear	00 @ 2 "
29	Light N. E. winds and Clear	02 @ 2 "
30	Light N. E. Winds and Clear	03 @ 2 "
31	Light Easterly winds and Clear till noon after Light S. W. winds	02 @ 2 "

Gasmon's Harbour

months day	weather
1820	
October 1	Light Northerly breezes and fair weather
2	Fine Northerly breezes and fair weather
3	Light Northerly breezes and fair weather
4	First & middle part fine breezes & fair weat ^r latter Vble and Cloudy weather of Rain
5	Fresh Easterly breezes and Squally with Rain & Cloudy weather
6	Fine Southerly winds and fair weather
7	Light Variable airs and Calms with fair weather
8	Fine S. W. breezes and fair weather
9	Light Southerly breezes attended with Showers of Rain & Cloudy weath ^r
10	Light breezes and variable and Cloudy weather
11	Light Variable airs and fair weather
12	Light airs and variable and fair weather
13	Light airs and variable and fair weather
14	Light Northerly airs and Cloudy weather
15	Light Northerly airs with Calms fair weather
16	Light Northerly breezes and fair weather
17	Fine Northerly breezes and fair weather
18	Light Northerly breezes and fair weather
19	Light Northerly airs and fair weather
20	Fine N. E. breezes and fair weather
21	Light Northerly airs and Cloudy weather
22	Light Variable airs and fair weather
23	Light Variable airs and fair weather
24	Light airs & Variable and fair weather
25	Fine Northerly breezes and fair weather
26	Light Northerly breezes and fair weather
27	Light Variable airs and fair weather
28	Light variable airs and Cloudy weather
29	Light Variable airs and Cloudy weather
30	Light Variable airs and Clear
31	Light Variable airs and Cloudy

Regere

Month's day	Weather	Therm ^y
1820		
November 1	Light Westerly Winds and Clear	82 @ 2 PM
2	Light Easterly winds and Clear	82 @ 2 "
3	Moderate Westerly winds and fair	82 @ 2 "
4	Light N. W. winds and Clear	82 @ 2 "
5	Light S. W. winds and Clear	82 @ 2 "
6	Light S. W. winds and Clear	84 @ 2 "
7	Moderate Southerly Winds and Hazy	83 @ 2 "
8	Fresh N. E. Winds and Clear	82 @ 2 "
9	Light Southerly winds and Hazy	82 @ 2 "
10	Fresh S. W. winds and hazy	81 @ 2 "
11	Fresh N. E. winds and hazy	80 @ 2 "
12	Light Northerly winds and Hazy	77 @ 2 "
13	Light N. E. Winds and hazy	78 @ 2 "
14	Light N. E. winds and Clear	77 @ 2 "
15	Light Northerly winds and hazy	78 @ 2 "
16	Moderate N. E. winds and Clear	77 @ 2 "
17	Fresh N. E. winds and hazy	78 @ 2 "
18	Moderate N. E. Winds and hazy	78 @ 2 "
19	Light N. E. Winds and Clear	74 @ 2 "
20	Moderate N. E. Winds and Clear	74 @ 2 "
21	Light N. E. winds and Hazy	75 @ 2 "
22	Light N. E. Winds and Clear	75 @ 2 "
23	Light Northerly winds and Hazy	75 @ 2 "
24	Light Northerly winds and hazy	74 @ 2 "
25	Moderate N. E. winds and Clear	72 @ 2 "
26	Fresh Northerly winds and Clear	72 @ 2 "
27	Fresh N. E. Winds and Clear	73 @ 2 "
28	Moderate N. E. winds and Clear	72 @ 2 "
29	Moderate Northerly winds and Clear	72 @ 2 "
30	Fresh N. E. winds and Hazy	71 @ 2 "

Diamond Harbour

Month days

Weather

1820

Nov^r

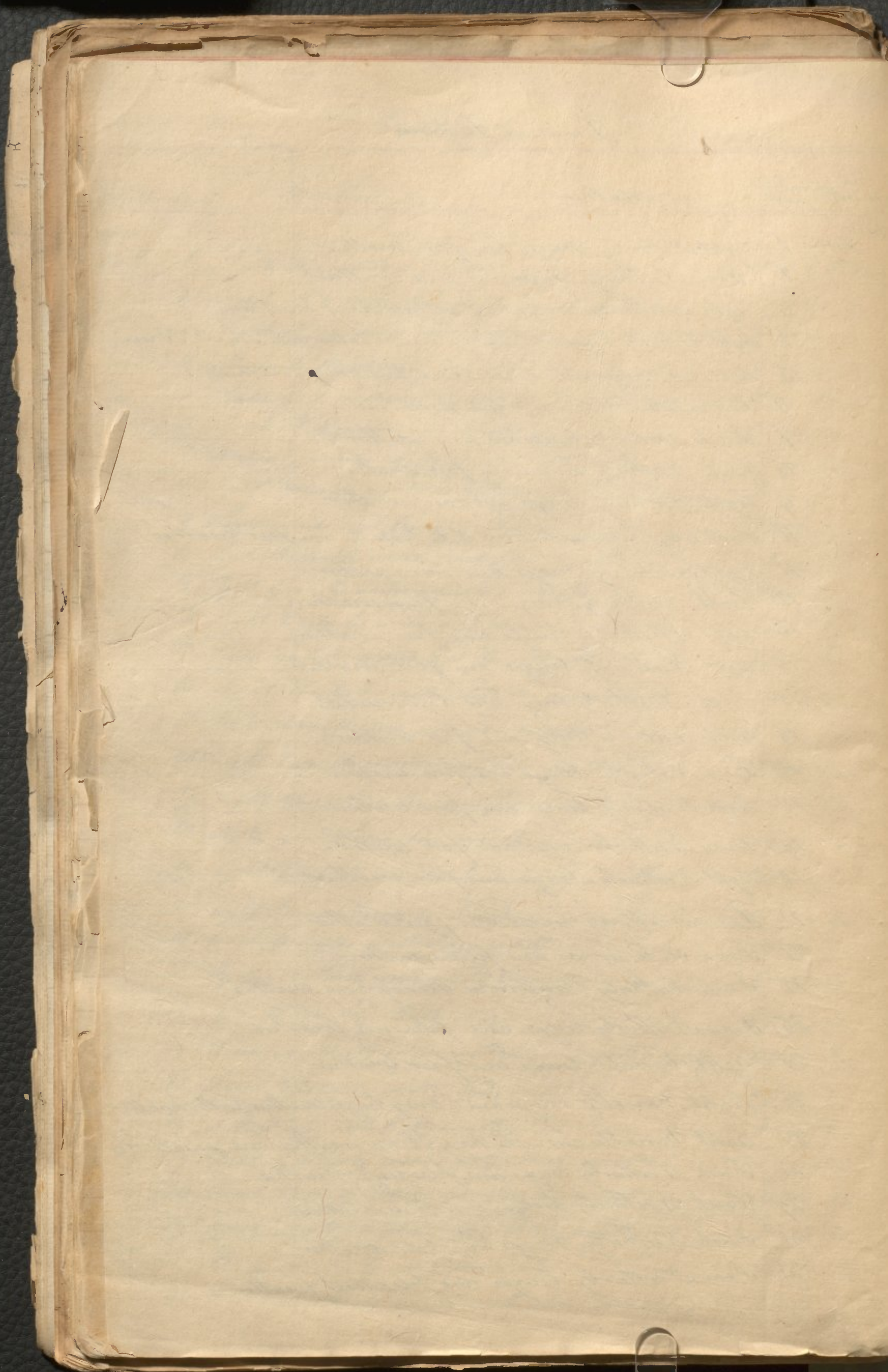
- 1 Moderate & Cloudy with Showers of Rain wind variable
- 2 Light variable airs and Clear
- 3 Light airs Clear wind variable
- 4 Light variable airs with Calms and Clear
- 5 Variable winds and fair weather
- 6 Light variable airs with
- 7 Light airs and variable with fair weather
- 8 Fine Northerly breezes and fair weather
- 9 Light Breezes from S^W E^W to S^W N^W and fair weather
- 10 Light variable airs and Pleasant weather
- 11 Light N^W E^W breezes and fair weather
- 12 Fine Northerly breezes and fair weather
- 13 Light Northerly breezes and fair weather
- 14 Light Northerly breezes and fair weather
- 15 Light Northerly breezes and fair weather
- 16 Light Northerly breezes and fair weather
- 17 Fine Northerly breezes and fair weather
- 18 Fine Northerly breezes and pleasant weather
- 19 Fine Northerly breezes and fair weather
- 20 Light Northerly airs and fair weather
- 21 Light Northerly breezes and fair weather
- 22 Light Northerly breezes and fair weather
- 23 Fine Northerly breezes and fair weather
- 24 Light Northerly breezes and fair weather
- 25 Light Northerly breezes and fair weather
- 26 Fine Northerly breezes and fair weather
- 27 Fine Northerly breezes and fine weather
- 28 Fresh Northerly breezes and fine weather
- 29 Fine Northerly breezes and fine weather
- 30 Light Northerly breezes and fine weather

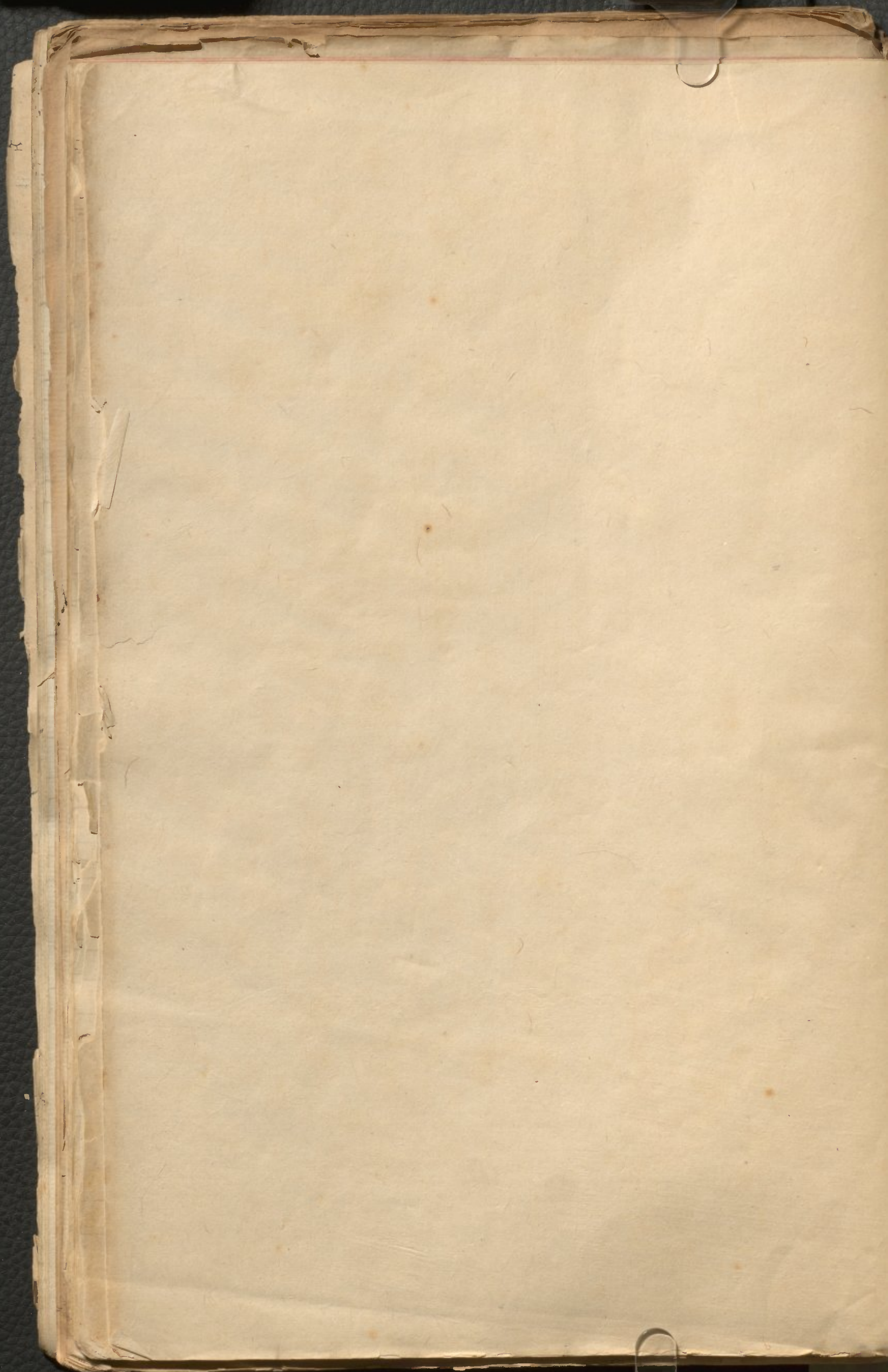
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Months	days	Weather	Therm ^s
1870			
Dec ^r	1	Fresh N. E. winds and Clear	71 @ 2 PM
	2	Fresh N. E. winds and hazy	72 @ 2 "
	3	Light N. E. winds and hazy	70 @ 2 "
	4	Moderate N. E. winds and Hazy	71 @ 2 "
	5	Light N. E. winds and small drizzling rain	60 @ 2 "
	6	Fresh N. E. winds and hazy	72 @ 2 "
	7	Northerly winds and fine weather	71 @ 2 "
	8	Light Variable winds and fine weather	70 @ 2 "
	9	Light winds and fine weather	72 @ 2 "
	10	Light variable winds and fine weather	72 @ 2 "
	11	Light Easterly winds and fine weather	72 @ 2 "
	12	Light Easterly winds and Clear	70 @ 2 "
	13	Light Easterly winds and fine weather	70 @ 2 "
	14	Light Easterly winds and fine weather	69 @ 2 "
	15	Light variable winds and fine weather	71 @ 2 "
	16	Light variable winds and fine weather	71 @ 2 "
	17	Light variable winds and fine weather	74 @ 2 "
	18	N. E. winds and fine weather	71 @ 2 "
	19	Light Easterly winds and hazy weather	70 @ 2 "
	20	Light variable winds and fine weather	72 @ 2 "
	21	Easterly winds with hazy weather	70 @ 2 "
	22	Light Northerly winds and Clear	69 @ 2 "
	23	N. E. Winds and Hazy	67 @ 2 "
	24	Fresh Northerly winds with Clear weather	67 @ 2 "
	25	Fresh Easterly winds and Clear	67 @ 2 "
	26	N. E. Winds with Hazy weather and Rain	65 @ 2 "
	27	Light Northerly winds with Hazy weather	63 @ 2 "
	28	Fresh Easterly winds and hazy weather	60 @ 2 "
	29	Fresh Northerly winds and hazy weather	64 @ 2 "
	30	Strong Northerly winds and Clear	63 @ 2 "
	31	Fresh Northerly winds with clear weather	64 @ 2 "

Diamond Harbour

months	days	Weather
1870		
Dec ^r	1	Light Northerly breezes and fine weather
	2	Fine Northerly breezes and fine weather
	3	Light Northerly breezes and Cloudy hazy weather
	4	Light Northerly breezes with Cloudy weather latter with small Rain
	5	Light N. E. breezes with Small Rain and Cloudy weather
	6	Fresh N. E. breezes and Cloudy weather
	7	Fresh Northerly breezes and fine weather
	8	Fresh Northerly breezes and fair weather
	9	Light Northerly breezes and fair weather
	10	Light breezes & variable from N. E. to N. W. and fair weather
	11	Light Northerly breezes and fair weather
	12	Light Northerly breezes and fair weather
	13	Light Northerly breezes and fair weather
	14	Light Northerly breezes and fair weather
	15	Light Northerly breezes and fair weather
	16	Light Northerly breezes and fair weather
	17	Fine Northerly breezes and fine weather
	18	Light Northerly breezes and fine weather
	19	Fine Northerly breezes and fair weather
	20	Light Northerly breezes and fair weather
	21	Fine Northerly breezes and fair weather
	22	Fresh N. E. breezes and fine weather
	23	Fresh Northerly breezes and Cloudy hazy weather
	24	Fine Northerly breezes and pleasant weather
	25	Light Variable breezes and fair weather
	26	Light Variable breezes and Cloudy hazy weather with Small Rain
	27	Light Variable airs with hazy Cloudy weather and small Rain
	28	Fresh Northerly breezes and pleasant weather
	29	Fresh Northerly breezes and fine weather
	30	Fresh Northerly breezes and fair weather
	31	Fine Northerly breezes and pleasant weather





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